

LIBRARY OF THE UNIVERSITY
OF ALBERTA

PROGRAM OF STUDIES FOR SENIOR HIGH SCHOOLS OF ALBERTA



CURRICULUM

LB
1629.5
A3
A35
1970c
gr.10-12

ALTA
375.10
1970c
gr.10-12

Department of Education
TON, ALBERTA

~~1970~~ 1974

CURRGDHT F

CURR HIST

INTRODUCTION

This Program of Studies contains an outline content of each course in the Senior High School together with a list of the recommended texts and approved secondary references. Regulations with respect to the credit value of courses, examinations and other matters relating to the operation of the high school appear in the current issue of the *Senior High School Handbook*.

Teachers who want suggestions concerning methods of handling a given course will find them in the related curriculum guide which may be obtained through the office of their superintendent or may be purchased from the Printing and Stationery Branch, Department of Education.

The assistance of committees in preparing the outlines in the various subjects is gratefully acknowledged.

1971, '72, 73, and 74

replacement sheets available

ACKNOWLEDGEMENT
SECONDARY SCHOOL CURRICULUM BOARD

Dr. E. A. Torgunrud Director of Curriculum (Chairman)
Dr. R. E. Blumell Coordinator of the Calgary Regional Office, Zone 5
Dr. I. Campbell Faculty of Science, University of Alberta
Dr. E. J. M. Church Director of Pupil Personnel Services
Dr. W. R. Duke Acting Director of Field Services
C. H. Emard Education Consultant
Miss Patricia English Alberta Teachers' Association
G. Ennis Medicine Hat College
E. M. Erickson Education Consultant
O. Fadum Coordinator of the Lethbridge Regional Office, Zone 6
Dr. J. D. Harder High School Inspector of Industrial Education
G. B. Hawley Education Consultant
Dr. Gudrun Hesse Department of Modern Languages,
University of Lethbridge
Dr. J. S. Hrabi Associate Deputy Minister of Education
J. W. James Superintendent of Secondary Schools,
Calgary Public School Board
Mrs. C. E. Lake Alberta Federation of Home and School Associations
Dr. P. A. Lamoureux Associate Director of Curriculum
Miss A. B. MacFarlane ... Education Consultant in Home Economics
R. Marrinier Education Consultant
K. E. McKenna Education Consultant
R. S. Melnychuk Director of Curriculum Environmental Studies,
Edmonton Public School Board
W. I. Miller Alberta Teachers' Association
J. Morris Advisory Board
Dr. S. N. Odynak Director of School Buildings
Dr. K. Puffer Northern Alberta Institute of Technology
C. Rea Alberta School Trustees' Association
Dr. H. G. Sherk Associate Director of Curriculum (Secretary)
K. P. Sterling Alberta Teachers' Association
W. H. Sweeney Alberta Teachers' Association
M. R. Treasure Education Consultant
G. Wahlstrom Alberta School Trustees' Association
Dr. R. Woock Faculty of Education, University of Calgary
W. T. Worbets High School Inspector of Business Education

TABLE OF CONTENTS

	Page
1. ART	1
Arts 10	2
Art 20	4
Art 21	5
Art 30	6
Art 31	7
2. BUSINESS EDUCATION	
Accounting 10	10
Accounting 20	11
Accounting 30	12
Business Foundations 10 and 30	13
Business Fundamentals 10	17
Business Machines 30	18
Business Organization and Management 30	19
Data Processing	19a
Data Processing 20	19b
Computing Science 30	20a
Law 20	21a
Merchandising 20	21b
Office Procedures	22
Clerical Practice 20	22
Office Practice 30	23
Record Keeping 10	27
Shorthand	28
Shorthand 20	29
Shorthand 30	30
Shorthand 31	30a
Typewriting 10	31
Typewriting 20	31a
Typewriting 30	31b
3. DRAMA	34
Initial Level	35
Intermediate Level	36
Advanced Level	36b
Drama 10 (Old course)	36c
Drama 20 and 30 (Old course)	37
4. DRIVER EDUCATION 10	37a
5. ECONOMICS 30	38
6. ENGLISH (Language Arts)	39
English 13	39
English 10	40
English 23	40
English 20	41
English 33	41
English 30	42
Reading 10	43
Literature 11	43
English Literature 21	43
English Language 22	45
English Language 21	46
Communications 21a and 21b	47
Literature 21a and 21b	48
7. GEOGRAPHY 20	52
8. HEALTH AND PERSONAL DEVELOPMENT 10	54

9. HOME ECONOMICS (Old)	
Home Economics 10	56
Home Economics 21	57
Fabrics and Dress 10	59
Fabrics and Dress 20	61
Fabrics and Dress 30	62
Foods and Nutrition 10	63
Foods and Nutrition 20	65
Foods and Nutrition 30	67
HOME ECONOMICS (New)	
Clothing and Textiles 10	67a
Clothing and Textiles 20	67a
Clothing and Textiles 30	67b
Food Science 10	67c
Food Science 20	67d
Food Science 30	67e
Modern Living 10	67f
Modern Living 20	67g
Modern Living 30	67i
10. INDUSTRIAL ARTS	
Industrial Arts General Technology 10, 20, 30	68
Industrial Arts Cluster 10, 20, 30	69
Materials 10	70
Materials 20	70a
Materials 30	71
Industrial Arts Electronics	71
Electronics 10	72
Electronics 20	73
Electronics 30	73
Drafting 10	73
Drafting 20	74
Industrial Arts Graphic Communications	74
Graphic Communications 10	74
Graphic Communications 20	76
Graphic Communications 30	76
Industrial Arts Power Mechanics	77
Power Mechanics 10	78
Power Mechanics 20	80
Power Mechanics 30	80
11. LANGUAGES OTHER THAN ENGLISH	
French	81
French 31	82
German 10 and 20	83
German 30 and 31	83a
Latin 10, 20 and 30	85
Ukrainian 10, 20 and 30	87
French As The Language Of Instruction	88
Langue et Littérature	88a
12. MATHEMATICS	
Math 10	89
Math 13	90
Math 15	91
Math 20	92
Math 23	93
Math 25	94
Math 30	95
Math 31	96
Math 33	97
Math 22 and 32	98

13. MUSIC	99
14. OCCUPATIONS 10	101
15. PHYSICAL EDUCATION	103
Phys. Ed. 10	104
Phys. Ed. 20	111
Phys. Ed. 30	112
16. PSYCHOLOGY 20	113
17. SCIENCE	
Objectives of Secondary School Science	116
Chemistry 10	116a
Physics 10	116a
Physics 10 (PSSC)	117
Chemistry 20 (CHEM Study)	118
Chemistry 20	119
Physics 20 and Physics 20 (PSSC)	120
Chemistry 30	121
Chemistry 30X	122
Physics 30	123
Physics 30X	124
Science 11	125
Physics 22	127
Physics 32	127
Biology 10	128
Biology 20	129
Biology 30	130
18. SOCIAL STUDIES	
Introduction	131
Social Studies 10	135
Social Studies 20	136
Social Studies 30	138
19. SOCIOLOGY 20	140
20. INDUSTRIAL EDUCATION	142
Visual Communications	143
Drafting	143
Graphic Arts	146
Commercial Art	150
Mechanics	152
Related Mechanics	152
Automotives	155
Auto Body	158
Aircraft Maintenance	161
Construction and Fabrication	164
Building Construction	164
Machine Shop	168
Welding	170
Sheet Metal	172
Piping	174
Electricity - Electronics	177
Electricity	177
Electronics	180
Personal Services	182
Food Preparation	182
Beauty Culture	184
Fashions and Fabrics	186
Health Services	188



Digitized by the Internet Archive
in 2012 with funding from
University of Alberta Libraries

<http://archive.org/details/programstudiescshs70albe>

SENIOR HIGH SCHOOL ART

General Comments

Five courses are offered in Senior High School Art. These new courses have been planned to help students develop a positive attitude towards art by providing structure and continuity in the program.

Arts 10, a basic general art course, is offered for all Alberta High School students. This program combines and replaces the previous art courses — Art 10 and Arts and Crafts 10. The student should develop some understanding and awareness of the art achievements of the past and present.

Art 20 is a study of drawing, painting, printmaking, sculpture, and environmental design, together with art history related to each area. Art 21 is a study of the creative crafts related to clay, textiles, metal, wood and synthetic materials. Arts 10 is a prerequisite for either Art 20 or Art 21. Art 20 and Art 21 may be taken concurrently.

Art 30 is a study in depth of drawing, painting, printmaking, and sculpture. Art 20 is a prerequisite for Art 30. Art 31 is a study in depth of selected areas from the Art 21 program, and Art 21 is the prerequisite of Art 31. Art 30 and Art 31 may be taken concurrently.

Ideally, all high school students should have experiences in art both as consumers and as producers. Through the use of slide and film presentations, lectures, discussions, demonstrations, and experiments with line, shape, tone, color, and texture in a variety of media, students should develop a greater sensitivity to aesthetic values in nature and in art. They should develop the ability to make independent and discriminating judgments as consumers of all sorts of man-designed objects in daily use. They should discover in art a means of understanding other cultures and of providing a source of deep personal satisfaction. The basic course, which involves training in the principles of the structure of art, is necessary for effective achievement in subsequent, more specialized courses.

These courses differ from the previous art courses in their emphasis on design and exposure to a broader range of media. They should be taught only by qualified art teachers, as the strength of the program depends on the ability, experience and enthusiasm of the teacher. The art classroom should contain a projector and screen for viewing slides; classroom reference books on art; working space, storage space, and exhibition areas for both two- and three-dimensional work. Instruction will be facilitated by installing a screen and projection facilities within the art room, so the instructor will be able to combine the use of visual aids with ongoing activities.

Objectives

To help the student:

- develop perceptual awareness and sensitivity; to see, feel and appreciate design in the world
- develop an awareness and understanding of the art of the past and the present
- develop his ability to apply his understanding of design principles to self-expression in art and everyday living

- develop in the various areas of the visual arts, such skills and techniques as may be necessary for the student's self-expression.

Student involvement will be continually influenced by the changing social patterns which may create a desire to investigate:

- contemporary and emerging art forms
- contemporary and emerging artistic vocabulary
- contemporary and emerging materials.

ARTS 10

Course Content

The Arts 10 course is divided into eight separate units. In the normal school year approximately four weeks would be given to each. Each unit is considered of equal importance. The general content of each unit is outlined below; the program within these broad general areas should be structured by the art teacher, making use of the grid in the teacher's guide. Except for the design unit and the one on individual projects which falls at the end of the course, the units may be studied in any desired order.

Art history is to be incorporated into all units. For purposes of this course, it is recommended that the five main periods surveyed include: ancient art, medieval art, renaissance art, nineteenth century art and modern art.

Work within each unit should further the objectives of the course. The importance of both aspects of the course, understanding and expressing, cannot be overemphasized. However, the time allotted to either area of involvement will depend on the approach of the teacher and how the various units and activities of the program interrelate. It may be advantageous, in the judgment of the teacher, to begin some units with appropriate activities and work through these to appreciation and understanding.

A.—Design

1. Language of design
 - (a) elements and principles

B.—Drawing

1. Contour
2. Gesture
3. Mass
4. Finished Compositions

C.—Painting

1. Pattern
2. Form
3. Composition

D.—Printmaking

1. Surface Printing
2. Relief Printing
3. Stencil Printing (as in silkscreen)

E.—Sculpture (clay, wood, metal, snow, ice, synthetics)

1. Relief sculpture
2. Three-dimensional forms

F.—Crafts (the decorative arts)

1. Ceramics
 - (a) hand building
 - (b) decorating
2. Fabrics
 - (a) fabric making
 - (b) fabric decorating
3. Metals
 - (a) shaping and joining
 - (b) decorating

G.—Environmental Study

1. Architecture and Surroundings
 - (a) buildings
 - (b) landscaping
 - (c) town planning
2. Product Design
 - (a) designing and advertising consumer goods

H.—Individual Projects

1. One or two additional research projects chosen by each student.

ART 20

Introduction

The Art 20 course is divided into five units — drawing, painting, printmaking, sculpture, and environmental design. It is expected that the limited scope of this program will allow greater in-depth study to be made. Further depth could be accomplished by incorporating drawing, related history and environmental design as they apply to painting, printmaking and sculpture. All units should be preceded by a review of the appropriate basic units in Arts 10 in order to ensure smooth transition.

It is important that a student at this level be given increased opportunity to acquire greater proficiency in expressing himself both orally and in written assignments, and, therefore, he should be familiar with the terminology specific to each unit as it develops throughout the total high school art program.

Teacher and student must always be conscious of the balance between the study of works of art, individual creativity, experimentation, and skill in the use of tools and materials. The goal is neither perfection in techniques nor a memorization of historical and theoretical facts, but an involvement in a variety of art fields in sufficient depth to allow the student to assess his true interest and potential.

As an aid to greater aesthetic understanding and growth of skills, the student is encouraged to make comparative studies of the art forms of the past and present. Besides making use of the learning opportunities within the classroom, he should carry out independent research and experimentation in areas of specific interest to himself. He should assume more responsibility in planning and evaluating his own projects, and in discussing problems of mutual interest with other members of his class.

Through continued attention to the elements and principles of design, the student should become increasingly aware of both good and poor design in his community. He should be encouraged to use sketchbooks, written notes, and photography to record ideas from as many sources as possible.

COURSE CONTENT

A. Drawing

1. Analysis of drawings in relation to final use
2. Recognition of past drawing styles
3. Further development of drawing activity
4. Continued use of sketchbooks.

B. Painting

1. Recognition of painting styles of individual artists
2. The use of painting to record reaction to environment
3. Increased skill and understanding in use of media and tools.

C. Printmaking

1. Study of relationship of drawing and painting to printmaking
2. Comparative study of work of the past
3. Increased skill and understanding in printmaking techniques.

D. Sculpture

1. Comparison and study of the form of natural and man-made objects
2. Study of the expressive qualities of sculpture throughout history
3. Applying the principles of design in creating sculptured forms.

E. Environmental Design

1. Develop an awareness and appreciation of compatibility between man-made and natural surroundings
2. Comparative review and study of architectural features as they relate to materials and locale
3. The place of painting, printmaking and sculpture in our environment.

ART 21

Introduction

The Art 21 course is divided into five units — design in crafts, clay, wood, metal, and fabric. Arts 10 presented a brief introduction to crafts design and activities, while Art 21 presents an opportunity for depth study in enrichment of functional objects through unique construction and applied decoration.

There is a need for better understanding and appreciation by the general public of the place of the handicrafted objects in our daily life and of the need for improved design in everyday articles. Through a study of man's attempts to relate design to function, appreciation for aesthetic forms can be developed. This study should include an evaluation of the approaches taken by artisans of the past and present.

The students choosing Art 21 should become personally involved in designing objects and working with materials that are used in the production of functional and decorative pieces. He should attempt problems in design which will involve clay, fabrics, metal, wood and synthetics. Decoration must be avoided unless it is an integral part of the whole unit. Each project should be planned carefully, executed with increasing competence in the use of tools and materials, and on completion, evaluated by teacher and student.

The program should be carefully planned to make the most efficient use of facilities and equipment. Reference books and audio-visual material must be readily available to provide for individual study.

COURSE CONTENT

A. Design as it Applies to Crafts

1. A review of design principles as they apply specifically to the units of study
2. Continued use of drawing to interpret ideas for designs
3. Appreciation of the role of the artist/craftsman in the machine age.

B. Clay

1. Survey of the use of clay in the past and a comparison of cultural styles
2. Consideration of the possibilities and limitations of clay
3. Experimentation and development of clay bodies, building techniques and glazes.

C. Wood

1. Survey of outstanding wood crafts of various countries, emphasizing Canadian
2. Awareness of the suitability of wood to its ultimate form and use
3. Development of skill in designing, shaping, assembling, and finishing.

D. Metal

1. A review of the traditional and contemporary uses of metal in crafts
2. Applying elements and principles of design to forming and finishing various metals.

E. Fibers and Fabrics

1. Survey of fiber and fabric crafts throughout history
2. Development of pattern, texture, and color awareness in relation to fabric
3. Development of skill and discrimination in fabric creation and decoration.

ART 30

Art 30 is an extension of both Arts 10 and Art 20 courses. Art appreciation in the Arts 10 program may be viewed as being concerned with recognition of the art of the past and present, while in Art 20 the emphasis is on comparison of styles and techniques. Art 30 students should continue with both of these approaches, but in addition, should develop ability in assessing the work of others, in self-evaluation, and in personal interpretation.

In the three areas of the Art 30 course — painting, printmaking, and sculpture — the emphasis may be placed on any one unit, on appreciation or on activity. It must not be assumed that the two areas of drawing and environmental design, as in Art 20, are to be omitted; these should be incorporated as an integral part of each of the three activities. Principles and elements of design should form the natural core of every project undertaken.

To develop understanding and techniques in drawing, students should be encouraged to work with both visible and imagined forms. Through a study of the graphic symbolism of other artists, the student should develop his own interpretive style, keeping in mind the value of using minimum lines for maximum meaning. The student should have carefully recorded sketches and notations to be used in completing projects in every area.

The individual student, in consultation with the teachers, should plan a well-balanced program. One approach that might be considered is that of deep exploration on one theme, with appropriate interpretation of the idea to apply to different media within one area, or one idea to be used in two or three ongoing activities. For example, a natural form could be the subject chosen for projects executed in various styles and techniques in painting, or it could be the theme for activities in painting, printmaking, and sculpture.

Art 30 students should be well aware of the growth of Canadian art in the 20th century. Art 30 students, in conjunction with Art 31 students, should plan, organize, and set up individual and/or group exhibitions in the school and community.

COURSE CONTENT

A. Painting

1. Comparative and critical study of paintings, with the major emphasis on 20th century artists
2. Study of symbolism —
 - a. appreciation — to develop the student's understanding of symbolism as employed by artists

- b. execution — to develop the student's ability to employ symbolism in his own work as a personal vocabulary
- 3. Use of design principles and symbolism in developing creative expression through painting.

B. Printmaking

- 1. A study of contemporary printmaking
- 2. Individual depth studies in selected areas, for example — block, plate
- 3. Introduction of a new method, such as lithography, collagraphy
- 4. Experimental printing
 - a. combining various methods
 - b. using unusual materials
 - c. exploring surface distortions.

C. Sculpture

- 1. A study of contemporary trends in sculpture, noting:
 - a. simplicity of form
 - b. synthetic, traditional and mixed media
 - c. emerging forms, such as kinetic
- 2. Personal interpretations in three-dimensional forms
- 3. Individual depth studies in selected media, for example, one theme executed in various methods.

D. Students Should Present on Completion of Course:

- 1. Portfolio in two parts
 - a. work completed in class
 - b. work done independently
- 2. Sketchbooks with notations
- 3. Design project — illustrated development of some aspect of design
- 4. Independent written report about one work of art chosen by the student.

ART 31

The Art 31 program is a study in greater depth of the craft designs introduced in Arts 10 and continued in Art 21. Students will have learned to recognize the craft forms used throughout history in numerous geographic areas, and will have compared materials, techniques and styles. At the Art 31 level, the emphasis should be on the study of recent trends in the uses of both old and new materials. Attention should be given to North American crafts, particularly to the work of Canadian artisans.

Art 31 consists of design projects using such traditional materials as clay, metal, fibers and fabrics, as well as synthetics or any suitable combinations, including wood. The emphasis may be placed on any approach — on a particular unit, on appreciation, or on activity. Students should not lose sight of the value of drawing, in developing ideas for projects, or of the design relationship of crafts to environment. As in other art courses, a carefully compiled logbook recording drawings and notations of personal observations is a necessity.

The Art 31 student, in consultation with the teacher, should plan a program which encompasses the major craft forms of expression but which permits him to do some specialization in one particular craft activity. At times it may become necessary to carefully program the projects of Art 31 students in order to provide maximum use of facilities or equipment that may be limited in quantity, such as wheels, torches, looms. Students should be aware of the merit of out-of-class projects and these should be evaluated along with those done during class periods.

Art 31 students, in conjunction with Art 30 students, should plan, organize and set up individual and/or group exhibitions in the school and community.

COURSE CONTENT

There should be a broad involvement in the following areas, but at times it may be necessary to do some selecting based on facilities within the art room.

A. Clay

1. Study of contemporary pottery, noting the work of Canadian potters
2. Further experiences in clay-forming methods with individual specialization in one technique
3. Design and execute architectural accents in clay — such as panels, planters, dividers, murals
4. Experimental work in glazes and glazing.

B. Metal

1. Study of the use of metals by contemporary artist/craftsmen
2. Depth study in jewellery — such as forming, casting, piercing, enamelling, etching, and/or combining with other materials
3. Artistic expressions of utilitarian objects — such as candlesticks, servers, tableware
4. Use of metal for architectural accents — such as weather vanes, door knockers, decorative lamps.

C. Fiber and Fabrics

Fibers — yarns, reeds, grasses

1. Study of contemporary weaving
2. Experimentation with looms — inkle, waffle, harness (table or floor)
3. Knowledge of and experience with traditional threading and weaving techniques
4. Ability to create patterns
5. Experimentation — yardage, wall hangings, dividers.

Fabric Decoration — cottons, burlap, net

1. Study of contemporary work in stitchery, dyeing, and printing
2. Batik — study of traditional methods and experimentation with contemporary approaches
3. Experimentation with natural materials for creating dyes
4. Exploration and experimentation to decorate cloth for yardage, wall hangings, banners.

D. Students Should Present on Completion of Course:

1. Portfolio in two parts:
 - a. work completed in class
 - b. work done independently

2. Sketchbooks with notations
3. Design project — illustrated development of some aspect of design of a craft project
4. Independent depth study and report of one aspect of a craft.

NOTE:

Other Materials—The above listing does not exclude the use of other materials that are now on the market or may appear in the future. Imaginative use of found and new materials, as they apply to the craft field is encouraged. In some situations teachers or students may find locally available materials that may be incorporated into the program.

BASIC LIST OF REFERENCE BOOKS FOR ART CLASSROOM

Design and Composition:

Bevliv. *Design Through Discovery*. Holt Rinehart, 1963.

Looking and Seeing. 4 books plus guide. Ginn and Co., 1964.

History of Art:

Brieger et al. *Art and Man*. 3 Vol. Holt Rinehart, 1964.

Janson. *History of Art*. Abrams, 1963.

Drawing:

Rottger. *Creative Drawing: Point and Line*. Reinhold, 1964.

Painting:

Sorgman. *Brush and Palette*. Reinhold, 1965.

Printmaking:

Andrews. *Creative Printmaking*. Prentice-Hall, 1964.

Sculpture:

Johnson. *Sculpture — Basic Methods and Materials*. McKay, 1960.

Design Crafts:

Moseley et al. *Crafts Design*. Wadsworth, 1962.

Rottger. *Creative Clay Crafts*. Copp-Clark, 1963.

Design in Commerce and Industry:

Faulkner. *Art Today*. Fourth edition. Holt, 1962.

Additional References for Senior Art Classes:

In addition to the basic reference books for art classrooms the following books should be added for senior courses:

Mendelowitz. *Drawing*. Holt Rinehart, 1965.

*Ocvirk, Bone, Stinson and Wigg. *Art Fundamentals (Theory and Practice)*. Second edition. William Brown Co., 1968.

Peterdi. *Printing Methods Old and New*. Macmillan, 1959.

*Schinneller. *Art: Search and Self-Discovery*. Second edition. International Textbook, 1968.

Slivka, Rose et al. *The Crafts of the Modern World*. Horizon Press, 1968.

Struppeck. *The Creation of Sculpture*. Holt, 1952.

NOTE:

- Reference books for each senior high school art room, as listed above, would cost approximately \$75.00 per set. The same library would be basic for other high school art courses.
- Newer books may be substituted for the above as better material becomes available in the different areas.
- Paperbacks and art periodicals should be added to this basic library.

*These books are recommended for primary pupil references.

BUSINESS EDUCATION

ACCOUNTING 10

Primary References

Boynton, et al. *20th Century Bookkeeping and Accounting*. Twenty-third edition. W. J. Gage Limited, 1969. Introductory Course (B856).

or

Syme, G. *Accounting I*. Prentice-Hall of Canada Limited.

or

Kaluza, H. J. *Elements of Accounting*. McGraw-Hill Co. of Canada Limited, 1969. (92455)

Objectives

1. To emphasize the importance of maintaining adequate accounting records in business and in personal affairs.
2. To provide a basic training in accounting for a small business and for personal use. These include cash control and payroll.
3. To provide the foundation for more advanced training in accounting.
4. To develop traits of neatness, accuracy and the ability to interpret and analyze accounting records of a small business.
5. To introduce common business terms and accounting procedures in realistic settings.

Scope**Recommended Texts**

Course Content	W. J. Gage	Prentice-Hall	McGraw-Hill
1. Small Business	Chapters 1-11 (Chapter 9 optional)	Chapters 1-6	Chapters 1-6
2. Banking Activities	Chapter 17 and pages 410-414 (Petty cash)	Part Ch. 10 (Petty cash) and Chapter 11	Chapter 7
3. Payroll	Chapter 25	Chapter 13 Part dealing with recording payroll	Chapter 10 — topics 1, 2, 3, and topic 4 to the top of page 227

Workbooks

Workbook 10 for *20th Century Bookkeeping and Accounting* (Acct. 10).

Working Papers for *Accounting I*, Set I — Chapters 1-10, Set II, Chapters 11-15.

Working Papers I for *Elements of Accounting* (Chapters 1-7).

Practice Materials —

(One or more may be selected)

1. *Family Finance Simulation*, B936 or B827, Gage.
2. *Professions Accounting*, B937 or B828, Gage.
3. *Service Station Set*, A215, Gage.

ACCOUNTING 20

Primary References

Boynton, et al. *20th Century Bookkeeping and Accounting*. Twenty-third edition. W. J. Gage Limited, 1969. Introductory Course (B856).
 or
 Syme, G. *Accounting I*. Prentice-Hall of Canada Limited.
 or
 Kaluza, H. J. *Elements of Accounting*. McGraw-Hill Co. of Canada Limited, 1969. (92455)

Objectives

1. To emphasize the importance of maintaining adequate records in a merchandising business.
2. To provide a basic training in typical accounting duties encountered in a merchandising business.
3. To provide a broader foundation for more advanced training in accountancy.
4. To develop an understanding of the preparation of financial statements and their significance in the accounting cycle.
5. To emphasize the function of accounting records as an aid to management and the need for intelligent interpretation of accounting records.

Scope

Recommended Texts

Course Content	W. J. Gage	Prentice-Hall	McGraw-Hill
1. Merchandising Business	Chapters 12, 13, 14, 15	Chapters 7, 8, 9. Balance of Chapters 10, 12	Chapters 8, 9, 11, 12
2. Synoptic Journal	Chapter 23 to page 409	Chapter 8	None
3. Bad Debts, Depreciation	None	Chapter 14	Chapter 13
4. Payroll	Chapter 26	Balance of Chapter 13	Chapter 10, Topic 4
5. Work Sheet Adjustments	Chapters 18, 19, 20	Chapters 14, 15	Chapters 13, 14

Workbooks

Workbook 20 for *20th Century Bookkeeping and Accounting* (Acct. 20).

Working Papers for *Accounting I*, Set I, Chapters 1-10, Set II, Chapters 11-15.

Working Papers II for *Elements of Accounting* (Chapters 8-14).

Practice Material

Spencer Athletic Goods, Parts 1 and 2, (B813C), W. J. Gage.

It is recommended that business papers rather than textbook narratives for transactions be used.

ACCOUNTING 30**Primary References**

Boynton, et al. *20th Century Bookkeeping and Accounting*, Advanced Course. Twenty-third edition (Canadian edition). W. J. Gage Limited, 1970. (B88C).

Kaluza, et al. *Elements of Accounting: A Systems Approach*, Advanced Course, McGraw-Hill Ryerson Ltd. 1971.

Optional References

Kaluza, H. J. *Elements of Accounting*. Canadian edition. McGraw-Hill Co. of Canada Limited, 1969. (92455).

Syme, G. *Accounting I*. Canadian edition. Prentice-Hall of Canada Limited, 1970.

Finney and Miller. *Principles of Accounting* (Introductory). Canadian edition. Prentice-Hall of Canada Limited.

Accounting Basics Series (Canadian edition)

- *Introduction* by R. E. Beam and C. Lund.
- *Special Journals and Related Systems* by R. E. Beam, C. Lund, and R. A. Myers.
- *The Balance Sheet* by R. E. Beam and C. Lund.

This series published by Prentice-Hall of Canada Limited.

Objectives

1. To emphasize the importance of maintaining adequate accounting records in all types of business.
2. To provide a basic understanding of accounting procedures applicable to single proprietorships, partnerships, and corporations.
3. To provide a foundation for post-secondary education and/or professional accounting.
4. To develop an understanding and use of financial records.

Scope

Course Content	W. J. Gage	McGraw-Hill Ryerson
1. Nature and Purposes of Accounting	Chapters 1 & 2	Chapters 1, 2 & 3
a. Accounting Principles		
2. General Accounting Concepts	Chapters 3, 4, 7-14	Chapters 4, 5, 11
a. Voucher System		
b. Inventory Control		
c. Notes, Interest, Drafts		
d. Departmental, Branch, Subsidiary Accounting		
e. Payroll		
f. Asset Valuation		
g. Accruals and Deferrals		
3. Budgeting	Chapter 5	Chapter 7
a. Types of Budgets and Their Uses		
b. Budgetary Reports		
4. Forms of Business Organization	Chapters 15, 16, 17	Chapter 8, 9
a. Single Proprietorship		
b. Partnership		
c. Corporation		
5. Financial Statement Analysis	Chapters 17 & 18	Chapter 12, 13
a. Income Statement		
b. Balance Sheet		
c. Comparative Statements		
d. Ratio and Graphic Analysis		

6. Cost Accounting Chapters 21, 22, 23 Chapter 6

- a. Service Department
- b. Manufacturing Operations
- c. Cost Accounting Statements

Optional Topics

7. Taxation	Chapter 6	Chapter 10
a. Sales Tax		
b. Income Taxes — personal and corporate		
Financial Statements		
a. Source and Application of Funds		
b. Analysis for Management		
c. Analysis for Investment		Chapter 13
Auditing		
a. Major Functions		Chapter 1 & 12
b. Basic Procedures		
Accounting Techniques and Methods	Chapters 19 & 20	Chapters 2 & 3
a. Peg Board		
b. Machine Accounting		
c. Punched Card		
d. Computer		
Special Sales Accounting	Chapters 24, 25 & 26	
a. Installment Sales		
b. C.O.D. Sales		
c. Consignment Sales		

Workbooks

Working papers for *20th Century Bookkeeping and Accounting* (Advanced Course)

Chapters 1-7 (B804C), Chapters 8-14 (B805C), Chapters 15-26 (B806C).

Working Papers for *Elements of Accounting: A Systems Approach*, Advanced Course)

Workbook I Chapters 1-7, Workbook II Chapters 8-14.

Practice Sets

(One or more may be selected)

Practice Set 1 — Reed Auto Supplies.

Practice Set 2 — Norton and Page Ltd.

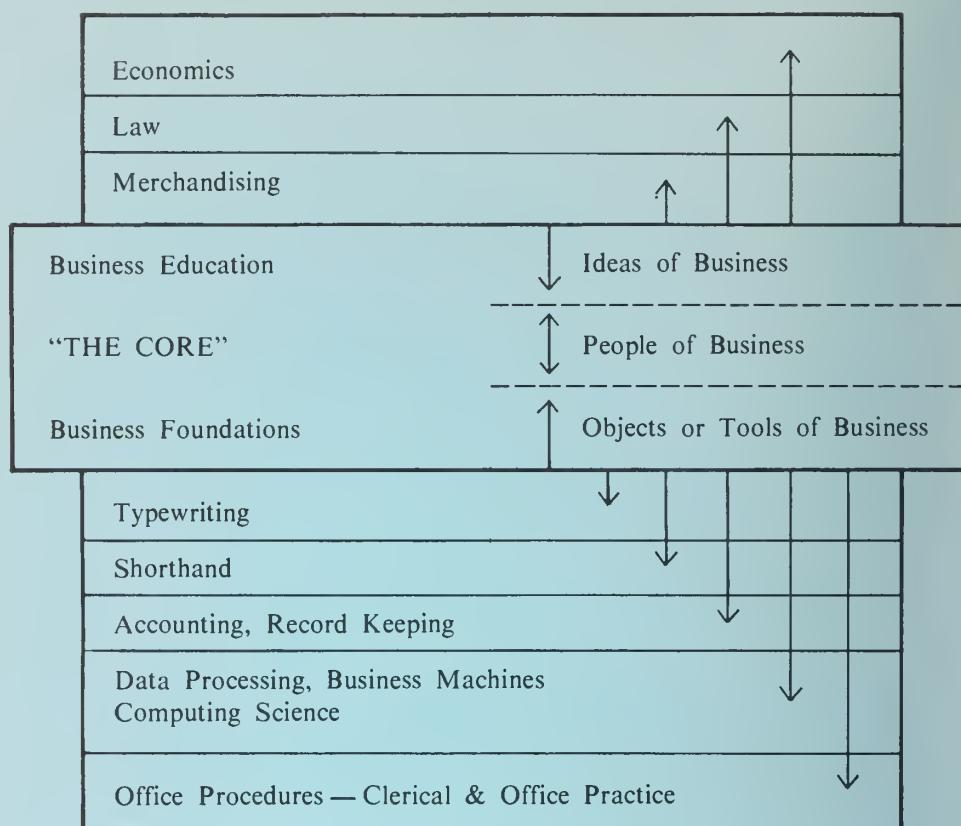
Practice Set 3 — Stanley Manufacturing Company Ltd.

These Practice Sets published by W. J. Gage Limited

BUSINESS FOUNDATIONS 10 AND 30

From the conceptual model explained in the Curriculum Guide for The Business Education Program and Business Foundations 10 and 30, and the preceding Objectives of the Alberta Business Education Program, the following blueprint was developed. It shows the relationship of the various subjects. Business foundations is the core of the program. Some subjects emphasize the ideas of business; others emphasize the objects or tools. People in business is the unifying aspect in all subjects relating the ideas with the objects and tools of business.

BLUEPRINT OF THE BUSINESS EDUCATION PROGRAM

**Objectives**

1. To provide an understanding of the Canadian business environment, that is, the ideas of business, the people of business and the objects or tools of business.
2. To develop recognition and an appreciation of the interrelationships and interdependence of all aspects of business.
3. To foster an awareness and appreciation of the human factors in business.
4. To provide for individual development in the behaviours of thinking, acting and feeling through the study of the business environment.

Scope**Business Foundation 10 (3 or 5 credits)**

Study the four major concepts in depth and breadth with emphasis on "Purpose of Business in the Canadian Economy" and "Consumption". The following list and bar graph indicate a division of the generalizations which have been developed for each subconcept in the Curriculum Guide for Business Foundations 10 and 30.

Five-credits — detailed coverage of the generalizations
 Three-credits — coverage of the generalizations in less detail

Business Foundations 30 (5 credits)

Study the four major concepts in depth and breadth with emphasis on "People of Business" and "Production". The following list and bar graph indicate a division of the generalizations which have been developed for each subconcept in the Curriculum Guide for Business Foundations 10 and 30.

Concepts and Subconcepts	Generalizations	
	Bus. Foundations 10	Bus. Foundations 30
I. Purpose of Business in the Canadian Economy		
Subconcept A	1 to 6	
Subconcept B	1 to 5	6
Subconcept C	1 to 6	7 and 8
II. Production		
Subconcept A	1, 2 and 5	3, 4 and 6
Subconcept B	1 to 3	1 to 5
Subconcept C	1 to 7	8 and 9
Subconcept D	1, 2, 4 and 6	3, 5, 7
Subconcept E	1	1 to 4
Subconcept F	—	1 and 2
Subconcept G	1 to 11	9 to 15
III. Consumption		
Subconcept A	1 to 5	
Subconcept B	1 to 3	
Subconcept C	1 and 3	2, 4, 5 and 6
Subconcept D	1, 4 and 5	2, 3 and 6
IV. People of Business		
Subconcept A	1 to 5	
Subconcept B	1 to 5	1 to 12

GUIDE TO CONTENT EMPHASIS BETWEEN FOUR MAJOR CONCEPTS AND THE TWO-LEVEL PROGRAM

Purpose of Business in Canadian Economy	Production	Consumption	People of Business
XXXXXX	XXXXXX	XXXXXX	XXXXXX
XXXXXX	XXXXXX	XXXXXX	XXXXXX
XXXXXX	XXXXXX	XXXXXX	XXXXXX
XXXXXX	XXXXXX	XXXXXX	XXXXXX
XXXXXX	XXXXXX	XXXXXX	XXXXXX
XXXXXX	+++++	XXXXXX	+++++
XXXXXX	+++++	XXXXXX	+++++
XXXXXX	+++++	XXXXXX	+++++
XXXXXX	+++++	+++++	+++++
XXXXXX	+++++	+++++	+++++
+++++	+++++	+++++	+++++
+++++	+++++	+++++	+++++
+++++	+++++	+++++	+++++
+++++	+++++	+++++	+++++
+++++	+++++	+++++	+++++

XXXXXX Business Foundations 10
+++++ Business Foundations 30

Primary References

It is suggested that textbooks listed below constitute the basic reference materials. Six copies of each title should be sufficient for an average class size.

Archer, *An Introduction To Canadian Business*, McGraw-Hill Ryerson Ltd., Scarborough, Ontario, 1967.

Bruce, Heywood & Abercrombie, *Business Fundamentals*, Second Edition, McGraw-Hill Ryerson Ltd., Scarborough, Ontario.

Herbert, *Introduction To Management*, Sir Isaac Pitman (Canada) Ltd., Toronto, Ontario, 1966.

Millard & Mitchell, *Economics: A Search For Patterns*, Gage Educational Publishing Ltd., Agincourt, Ontario, 1971.

Treliving & Murphy, *General Business and Consumer Fundamentals*, McGraw-Hill Ryerson Ltd., Scarborough, Ontario, 1970.

Course Content

CONCEPT I. PURPOSE OF BUSINESS IN THE CANADIAN ECONOMY

Subconcepts:

- A. Wants and Needs
- B. Demand and Supply
- C. The Canadian Economy

CONCEPT II. PRODUCTION

Subconcepts:

- A. Factors of Production
 - (a) Natural Resources
 - (b) Human Resources
 - (c) Capital Resources
 - (d) Entrepreneurship
- B. Supply
- C. Ownership
- D. Organization
 - (a) Manufacturing
 - (b) Marketing
 - (c) Financing
- E. Management
 - (a) Planning
 - (b) Organizing
 - (c) Staffing
 - (d) Directing
 - (e) Coordinating
 - (f) Controlling
- F. Specialization
- G. Human Resources
 - (a) Individual as a Producer
 - (b) Occupations in Production
 - (c) Welfare of People in Production

CONCEPT III. CONSUMPTION

Subconcepts:

- A. Consumer
- B. Demand
- C. Credit
- D. Welfare of the Consumer

CONCEPT IV. PEOPLE OF BUSINESS

Subconcepts:

- A. Importance of People in Business
- B. Behaviour of People in Business
 - (a) Behaviour of Individuals
 - (b) Behaviour of groups
 - (c) Organizational Behaviour
 - (d) Leadership, Management Behaviour
 - (e) Problems of People in Business

BUSINESS MACHINES 30**Primary References**

Appropriate references are to be chosen from the following:

Dool. *Business Machine Operations and Applications*. McGraw-Hill Ryerson Limited, Scarborough, Ontario, 1973.

or

Walker et al. *How To Use Adding and Calculating Machines*, (3rd Edition).
McGraw-Hill Ryerson Limited, Scarborough, Ontario, 1967.

or

Agnew et al. *Office Machines Course*, (3rd Edition). Gage Educational Publishing Co., Toronto, 1962.

or

English et al. *Machine Calculations*. Pitman Publishing Co., Toronto.

Objectives

1. To familiarize the student with business machines — their operating features, advantages, and their practical uses.
2. To make the student aware of the important role that machines play in the processing of data in the business world.
3. To provide a vehicle for developing further the thought processes of problem analysis and problem-solving.
4. To help the student achieve competence in the operation of business machines in practical situations.
5. To enable students to secure an understanding of the values, attitudes, and ethics needed for success in business.

Scope

Coverage of the course outline with emphasis on calculating machines.

Course Content

Specific Objectives

The student should be able to:

1. Demonstrate proficiency in the touch operation of ten-key calculators.
2. Add columns of figures at a speed of not less than 80 strokes per minute.
3. Add, subtract, multiply and divide using the prescribed method for the machine being used.
4. Use the techniques learned to complete accurately, realistic business problems.
5. Demonstrate the attitudes and work habits required in business.

DATA PROCESSING PROGRAM

Introduction

The Data processing program comprises two courses of instruction — Data Processing 20 and Computing Science 30. Data Processing 20 can be taught for three or five-credits and Computing Science 30 for five credits. Data Processing 20 is a general course of interest to all students in order to develop an appreciation of the significance of data processing in every day life and its offering is in no way dependent upon the availability of equipment. In Computing Science 30, emphasis is given to the programming of business, science and mathematics applications and to systems design. The offering of this course in Alberta schools is dependent upon the availability of computer time and equipment to prepare input data. Furthermore, the type of computer language used is dependent upon the capabilities of computers available to individual schools. Data Processing 20 is not necessarily a prerequisite to Computing Science 30.

Objectives

1. To promote an understanding of the fundamental principles in processing data by manual, mechanical and electronic means.
2. To provide a vehicle for developing further the thought processes of analysis, synthesis and problem-solving.
3. To present basic principles of logic which have eventual application in many decision-making situations.
4. To develop knowledge and skills in the general field of computing science.
5. To provide opportunities for students to develop effective interaction and the interdependence of man and machine.
6. To provide an understanding and appreciation of the interaction and the interdependence of man and machine.
7. To encourage student initiative, freedom of thought, and adaptability as preparation for future changes and developments in data processing.
8. To provide an introduction to data processing equipment and techniques as a broad base upon which the student may evaluate a possible career in this field.

DATA PROCESSING 20

Primary References

Wanous, Wanous, Wagner, *Fundamentals of Data Processing*, Gage Educational Publishing Limited, 1971.

or

Crawford, *Processing Information, The Computer in Perspective*, 1973
McGraw-Hill Ryerson Limited.

Support Materials

Teacher's Manual and Project Kit to accompany the above text.

Scope

Five-credits: Detailed coverage of the course outline.

Three-credits: Coverage of the course outline in less detail.

Course Outline

Generalization I:	Needs for Data Processing exist in various situations: CONCEPTS & SUB-CONCEPTS A. Data Processing Business Scientific Government
Generalization II:	Within Data Processing there are a series of operations: CONCEPTS & SUB-CONCEPTS A. Data Processing functions (operations) Recording Classifying Sorting

Calculating
Communicating
Storing

Generalization III:

Data Processing is carried out in a variety of methods:
CONCEPTS & SUB-CONCEPTS

- A. Methods of Data Processing
 - Manual
 - Electromechanical
 - Computer

Generalization IV:

A basic medium of information processing is the punch card.

CONCEPTS & SUB-CONCEPTS

- A. Physical Characteristics of a card
 - Dimensions
 - Edges
 - Rows
 - Columns
 - Corner Cuts
 - Color
- B. Representation of Data
 - Hollerith Code
- C. Card Planning and Lay-out
 - Field and Subfields
 - Principles of Card Design
- D. Card Application

Generalization V:

There are many processes and machines for handling punched card information:

CONCEPTS & SUB-CONCEPTS

- A. Recording and verifying
 - Mark sensing
 - Port-a-punch
 - Keypunch
- B. Sorting and Collating
 - Numeric
 - Alphabetic
 - Report Sorting
 - Sorting for selection
 - Merging
 - Matching
- C. Calculating
- D. Reporting

Generalization VI:

Any computer system is made-up of a number of basic components.

CONCEPTS & SUB-CONCEPTS

- A. Computer Types

- Digital
- Analog
- Hybrid
- B. Input
 - Direct entry into storage
 - Card reader
 - Magnetic tape devices
 - Paper tape devices
 - Optical character readers
 - Magnetic ink readers
 - Disks
- C. Central Processing Unit
 - Memory or Storage
 - Arithmetic and logic
 - Control
- D. Output
 - Printers
 - Card Punch
 - Paper tape punch
 - Magnetic tape units
 - Magnetic disk
 - Graphic plotters
 - Visual display devices
 - Audio response units

Generalization VII: Problem solving by a computer consists of a number of tasks.

CONCEPTS & SUB-CONCEPTS

- A. Programming
 - Problem definition
 - Flowcharting
 - Coding of Instructions
 - Testing of
 - Documentation

N.B. Depending upon the time and resources available to a teacher, a decision should be made regarding the depth to which the above topic may be explored.

Generalization VIII: The application of the computer in our society is varied.

CONCEPTS & SUB-CONCEPTS

- A. Business
- B. Government
- C. Science

Generalization IX: Information processing involves an interdependence of man and machine.

CONCEPTS & SUB-CONCEPTS

- A. Systems and Procedures

COMPUTING SCIENCE 30 (5 credits)

Introduction

The teaching of Computer Science 30 is dependent upon the availability of
19b

computer time and equipment to prepare input (programs and data). Before the decision is reached to offer this course, application should be made to the Curriculum Branch, Department of Education, indicating that:

1. A qualified teacher is on staff to teach the course.
2. Equipment needed to prepare student programs and data is available in the school, or has been approved for a new school by the School Building Board, Department of Education.
3. Computer time is available. The Curriculum Branch, Department of Education, will make arrangements for free computer time at the Northern and Southern Alberta Institutes of Technology, or local authorities may make arrangements with other data centres.

Primary References

Feingold, *Introduction To Data Processing*, Wm. C. Brown Co. Canadian agent, Burns and MacEachern Ltd., Don Mills, Ontario, 1971.

Support Materials

Teacher's Manual and Student's Workbook to accompany the above text.
or

Awad, *Business Data Processing*, Prentice-Hall of Canada, Ltd. Scarborough, Ontario, 3rd edition, 1971.

Support Materials

Teacher's Manual and Student's Workbook to accompany the above text.

Scope

Detailed coverage of the course outline.

Course Outline

Generalization I: There are many basic data processing principles:

CONCEPTS & SUB-CONCEPTS

Data Processing

 Problem definition

 Logical sequencing of events

Generalization II:

Any computer system is made up of a number of basic elements:

CONCEPTS & SUB-CONCEPTS

A. Input Unit

B. Output Unit

C. Central Processing Unit

 Memory

 Arithmetic and Logic

 Control

Generalization III:

A computer system may incorporate many and varied hardware devices.

CONCEPTS & SUB-CONCEPTS

A. Input/Output

 Card

 Card Punch

 Magnetic tape unit

- Key to tape unit
- Magnetic disk
- Magnetic drum
- Direct access terminal
- Paper tape reader
- Paper tape punch
- Line printer
- Magnetic ink character reader
- Optical character reader
- Visual display terminal
- Graphic plotter
- Audio response unit
- B. Primary memory**
- Magnetic Core
- Thin film
- Rod
- C. Auxiliary Memory**
- Magnetic disk
- Magnetic drum
- Data cell
- Magnetic tape

Generalization IV:

The functioning of a computer system is dependent upon a number of software factors:

CONCEPTS & SUB-CONCEPTS

- A. Machine language
- B. Compiler or assembler
- C. User program language
- D. Operating system commands

Generalization V:

Computer users must provide a system with a program in order to solve a problem.

CONCEPTS & SUB-CONCEPTS

- A. Basic computer instructions
 - Input/output
 - Arithmetic
 - Decisions
 - Looping
 - Lists and arrays
- B. Programming techniques
 - Data formating
 - Flowcharting
 - Coding in Programming language
 - Documentation
- C. Systems and Procedures

Generalization VI:

The field of computing technology is rapidly expanding and developing in our society.

CONCEPTS & SUB-CONCEPTS

- A. Impact of change in the computing field
- B. Impact of change on society

Objectives

1. To provide the student with a knowledge of the fundamental principle of law as it applies to common business transactions and to personal affairs.
2. To assist the student in knowing his responsibilities and rights and the relationship of these to the responsibilities and rights of other.
3. To develop an understanding of the functions and purposes of law in our society, including the development of our legal system and the courts that administer justice.
4. To assist the student in developing tolerance and maturity in the assessment of our legal system.
5. To provide opportunities for students to develop logical thinking and to use good judgement in applying legal principles to business and personal problems.

Primary References

Jennings, Zuber; *Canadian Law*, second edition; McGraw-Hill Ryerson, 1972.

Support Materials

Teacher's Manual to accompany the primary reference (*Canadian Law*, second edition).

Workbook to accompany the primary reference (*Canadian Law*, second edition).

Scope

Five-Credits — Coverage of all topics with emphasis on fundamental principles. However, some of the topics may be done more intensively than others.

Three-Credits — Coverage of the course outline in less detail.

Course Outline

1. Canadian Legal System
 - History of Law
 - Criminal and Civil Law
 - Law of Torts
 - Civil Rights
 - Citizenship
2. Family Law
 - Parents' and Children's Responsibilities and Rights
 - Marriage and Divorce
 - Welfare Legislation
 - Wills, Trusts, and Intestacy
 - Life Insurance
3. Commercial Law
 - Section A — Agreements
 - Contracts
 - Principal and Agent

Section B — Buying and Selling Goods

Conditional Sales

Bill of Sale

Mortgages

Law of Bailments

Banks and Bills of Exchange

Consumer Protection Legislation

4. Real and Personal Property

Assessment and Taxation

Real Property — Buying, Building, Renting

Sales of Goods and Personal Property

Securities Legislation

Bailment and Other Rights

Ownership of Personal Property

Torts and Negligence Legislation

Insurance of Property

M A R K E T I N G P R O G R A M

Individuals in our society are surrounded by the most complicated market place that man has ever created.

Marketing is all around us. We are surrounded by facilities that carry **products** — goods grown, extracted or manufactured and available for sale. We are also surrounded by establishments that offer **services** — benefits or satisfactions that improve the personal appearance, health, comfort, or peace of mind of consumers. Getting goods (and the products needed in making services available) grown, extracted or manufactured, to the consumer involves many activities such as selling, advertising, research, transportation, storage, and product planning. These activities make up the world of marketing — a world of people, products, action, and ideas.

The marketing program comprises two five-credit courses of instruction, Marketing 20 and Marketing 30. In Marketing 20 emphasis is on the study of the Canadian market system while in Marketing 30 students are provided with opportunities to study marketing personnel functions or activities within the various Canadian industries. The operation of a merchandising laboratory is an essential component in the teaching of both of these courses. Marketing 20 is a prerequisite to Marketing 30.

GENERAL OBJECTIVES OF MARKETING

1. To acquaint students with the significance of marketing in Canadian business, and with the occupational opportunities in Marketing.
2. To provide a background from which the students can analyze the interaction between, and the inter-dependence of the various activities in marketing.
3. To assist the students in developing inter-personal attitudes and abilities which are necessary in marketing.
4. To provide opportunities for students to apply marketing principles and skills, and to enable them to evaluate and analyze their performance in relation to the expectations of the business community.
5. To encourage students to become sensitive to the need for adaptability required in order to meet the ever-changing demands of marketing resulting from the constant social, economic, and technological changes in society.

MARKETING 20**Primary References**

R. Picard, *Marketing a Canadian Profile*, Pitman Publishing Company, 1972.

or

P. M. Banting, *Marketing in Canada*, McGraw-Hill Ryerson Limited, 1973.

Scope

Detailed coverage of the course outline.

Course Outline**CONCEPT I. MARKETING IN CANADA (General Overview)**

Subconcepts:

- A. Role of Marketing in Canada
- B. Magnitude of Marketing in Canada
- C. Marketing Mix
 - Product — Service
 - Price — Value
 - Promotions
 - Place — Transportation - storage
 - Personnel
- D. Other Marketing Mix Elements
 - Standardization — Containers
 - Bolts
 - Shipping Procedures
- E. Automatic Selling
- E. Government-Marketing Relationships

CONCEPT II. PRICE

Subconcepts:

- A. Components of Cost
 - Supplier's Invoice Price
 - Freight & Handling
 - Discounts
- B. Components of Markup
 - Expenses
 - Profit
 - Markdown
- C. Factors Influencing Markup
 - Perishability
 - Turnover
 - Workroom Costs
- D. The influence of the Marketplace
 - Supply
 - Demand
 - Competition
- E. Future Trends

CONCEPT III. PRODUCT

Subconcepts:

- A. Market Demand
- B. Market Research
- C. Quality and Quantity
- D. Branding
- E. Packaging and Labelling

- F. Servicing and Warranty
- G. Product Classification
- H. Service as a Product
- I. Product Differentiation

Size	Promotion
Model	Service
Services	Branding
Packaging	Quantity
- J. Future Trends and Projection

CONCEPT IV. PROMOTION

Subconcepts:

- A. The Responsibilities of Promotion
- B. Techniques and Tools of Promotion
- C. Evaluation of Promotion
- D. Future Trends

CONCEPT V. PLACE

Subconcepts:

- A. Concentration of Population
- B. Concentration of Industry
- C. Socio-Economic and Ethnic Factors
- D. Middle-man Concept and Channels of Distribution
- E. Transportation
- F. Building Facilities
- G. Labor Force
- H. Services
- I. Future Trends and Projections

CONCEPT VI. PERSONNEL IN MARKETING

Subconcepts:

- A. Communications
- B. Managerial Styles

Authoritarian	
Democratic	
Laissez-Faire	
- C. Personnel Functions

Managing	Renumeraling
Education	Training
Evaluating	
- D. Labor Relations
- E. Public Relations
- F. Future Trends and Projections

MARKETING 30

In Marketing 30 emphasis is placed on the study of personnel functions noted above in the various business enterprises. The objective is to study all functions in one or two selected industries. However, an opportunity should be provided for students to study in depth one or more personnel functions in selected industries.

'74

**PERSONNEL
FUNCTIONS**

**ADMINISTRATION
&
OFFICE SERVICES**

INDUSTRIES

PRODUCTION
Primary
Secondary

ACQUISITION

WHOLESALING

STORAGE

RETAILING

SELLING

SERVICE

PROMOTION

GOVERNMENT

MARKETING 30

Primary References

It is suggested that the following books constitute the basic reference materials for Marketing 30. For example, eight or ten copies of each title should be sufficient for an average class size.

Shilt, R. A. et al, *Business Principles and Management*, 6th edition, 1972, Gage Educational Publishing Limited.

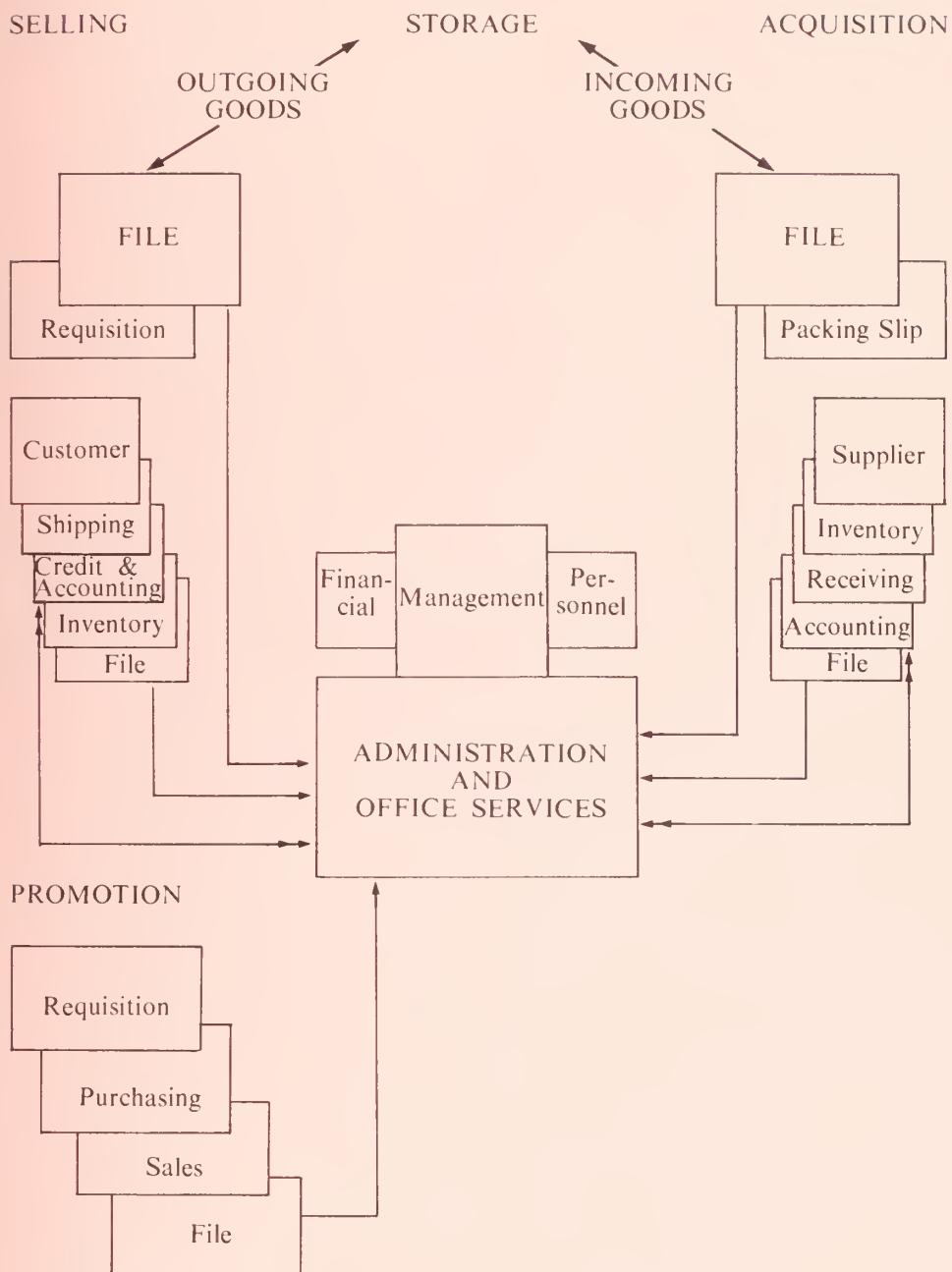
Oliver, R. E., *Advertising*, McGraw-Hill Series in Marketing, McGraw-Hill Ryerson Limited, 1969.

Ernest, J. W. and Ashmun R. D., *Salesmanship Fundamentals*, 4th edition, 1973, McGraw-Hill Ryerson, Limited.

Scope

Detailed coverage of the course outline.

INTER-RELATIONSHIPS OF PERSONNEL FUNCTIONS

**Course Outline****CONCEPT I.****ADMINISTRATION AND OFFICE SERVICES**
Subconcepts:

- A. The Entrepreneurial Process

- B. Forms of Ownership
 - Unincorporated
 - Incorporated
 - Public (Government)
- C. Management Functions
 - The Planning Function
 - The Organizing Function
 - The Leadership Function
 - The Controlling Function
- D. Management and Government
- E. Importance of Keeping Records
- F. Necessary Records
- G. Collecting & Recording Information (DATA)
- H. Processing Information
- I. Storing and retrieving of Information
- J. Customer Service
- K. Mail Room
- L. Office Staff and Central Files
- M. Personnel, Financial, Management Departments

CONCEPT II.

ACQUISITION

Subconcepts:

- A. Supply Analysis
 - Quality
 - Location
 - Availability
 - Delivery
 - Price
- B. Demand Analysis
 - Prior Consumption
 - Competition
 - Former Pricing
 - Sales Projectors
- C. Ethics
- D. Forms and Procedures

CONCEPT III.

STORAGE

Subconcepts:

- A. Function of Storage
- B. Storage Facilities
 - Private Warehouses
 - Public Warehouses
 - General
 - Special
 - Bonded
 - Field
- C. Receiving of Goods
- D. Internal Routines and Control
- E. Forms and Procedures
- F. Internal Security
- G. Trends and Developments in Storage

CONCEPT IV.

SELLING

Subconcepts:

- A. Selling as a Skill
- B. Selling Process
- C. Differentiation of Skills required in Selling
- D. Steps in the Sale

- The pre-approach
determining customer names
opening the sale
conducting the presentation
handling objections
closing
performing the mechanics
of closing
taking leave of the customer
- E. Selling Places and Situations
- F. Characteristics of a Successful Salesman:
Physical Characteristics
Character Traits
Skills
- G. Opportunities in Selling

CONCEPT V.**PROMOTION**

Subconcepts:

- A. Purpose of Promotion
- B. Budget
- C. Promotion on Basis of the Channels of Distribution
- D. Advertising
- E. Other Promotion Techniques
- F. Social and Economic Factors

MERCHANDISING 20**Primary References**

Wingate and Weiner. *Retail Merchandising*. Sixth edition. W. J. Gage.
G. E. Seguin. *Basic Retailing*. Pitman.

Objectives

1. To present occupational opportunities in the distributive fields in the business community.
2. To develop in the student the ability required for initial performance on the job.
3. To provide a basis for further study and experience.
4. To develop an appreciation of the part distribution plays in our free enterprise society.

Scope

1. The teacher should undertake to cover as many of the areas listed in either text as is consistent with student interest, ability and experience.
2. It is suggested that each student be required to present at least one piece of research during the year.

Workbooks

Workbooks which accompany the texts are available.

Teachers' References

Richert et al. *Retailing Principles and Practices*. Fourth edition. Gregg Publishing Company.

Workbook to accompany this.

Instructors Manual available.

Reich et al. *Basic Retailing*. Sir Isaac Pitman and Sons. Workbook For *Basic Retailing*.

Shaffer. *How To Be A Successful Retailer In Canada*. McGraw-Hill.

Richert and Stoner. *Retailing Problems and Projects*. Gregg Publishing Company.

A text-workbook.

Wingate and Nolan. *Fundamentals of Selling*. Seventh edition. W. J. Gage and Company.

Rowse and Nolan. *Fundamentals of Advertising*. Sixth edition. W. J. Gage and Company.

The National Cash Register Company has available a large and extremely fine collection of pamphlets and aids.

e.g.

1. *How To Keep Customers Buying*
2. *Today's Revolution In Retail Merchandising*.
3. *Cash Registers — Their Place In Modern Retail Security*.
4. *Toward Successful Service Station Management*.
5. *Credit and Collecting*.
6. *Expenses In Retail Business*.
7. *Making Your Windows Work For You*.
8. *Controlling Merchandise*.
9. *Pointing The Way Toward Merchandising Today*.

Gregory. *Salesmanship*. Sir Isaac Pitman and Sons.

Ernest and Davall. *Salesmanship Fundamentals*. Gregg Company.

Also excellent periodicals:

Financial Post.

Canadian Retailer. Maclean Publishing Company.

OFFICE PROCEDURES

(Clerical Practice 20, Office Practice 30)

Objectives

1. To provide instruction in basic skills required for initial office positions.
2. To develop desirable personal traits and work habits acceptable to office standards. The ability to work cooperatively with others must be emphasized. The above will require a year-long reinforcement.
3. To integrate new and previously learned skills by means of realistic office assignments.

Possible Alignments of Courses

The selection a school makes should be based on:

1. Equipment available in the school
2. Student's need
3. Demands of business in the community
4. Available space in the timetable
5. The offering of other courses
6. A one-year special program.

CLERICAL PRACTICE 20

Primary References

Sparling. *Complete Course in Office Practice*. Third edition. McGraw-Hill Company of Canada Ltd.

or

Reid. *Modern Office Procedures, Book I*. Sir Isaac Pitman (Canada) and one of:

- (a) Bassett, Agnew and Goodman. *Filing Office Practice*, K971C. Canadian edition. W. J. Gage.
- (b) Smith, M. D. *Canadian Filing Practice*. Sir Isaac Pitman (Canada).

Teachers' References

Farmer, G. M. *Word Division in Canadian Business Vocabulary*. W. J. Gage.
 Archer et al. *General Office Practice*. McGraw-Hill Co.
 Kahn-Yenan. *Progressive Filing*. McGraw-Hill Co.
 Agnew et al. *Clerical Office Practice*. McGraw-Hill Co.
 Alsop & McBride. *She's Off to Work — A Guide To Successful Living*. Vanguard Press.
 Gregg. *Applied Secretarial Practice*. Second Edition, Gregg. McGraw-Hill Co.
 Harris. *Business Offices*. Gregg. McGraw-Hill Co.
 MacGibbon. *Fitting Yourself For Business*. McGraw-Hill Co.
 (Valuable for Units 1 and 3).
 Moreland. *Typewriting and Office Practice*. Sir Isaac Pitman & Sons, Ltd.
 Strony-Greenway. *The Secretary at Work*. McGraw-Hill Co.
 Frasnacht. *How To Use Business Machines*. McGraw-Hill Co.

OFFICE PRACTICE 30**Primary References**

Reid. *Modern Office Procedures, Book 2*. Sir Isaac Pitman (Canada).
 and one of:
 (a) Bassett, Agnew and Goodman. *Filing Office Practice*, K971C. Canadian edition. W. J. Gage.
 (b) Smith, M.D. *Canadian Filing Practice*. Sir Isaac Pitman (Canada).

Teachers' References

Agnew et al. *Secretarial Office Practice*. Sixth edition. W. J. Gage.
 Gregg et al. *Applied Secretarial Practice*. Fifth edition. McGraw-Hill.
 Hager et al. *Business English Essentials*. McGraw-Hill Co.
 Robertson, Carmichael. *Business Letter English*. McGraw-Hill Co.
 Mayo. *Communications Handbook For Secretaries*. McGraw-Hill Co.
 Aurner. *Effective Business English*, E15. W. J. Gage Ltd.
 Larison. *How To Get and Hold The Job You Want*. Longmans, Green & Co.
 Warner. *Canadian Commercial Correspondence*. Sir Isaac Pitman & Sons, Ltd.
 Bassett, Agnew. *Business Filing*. E98. W. J. Gage Ltd.
 Farmer, G. M. *Word Division in Canadian Business Vocabulary*. W. J. Gage.

SCOPE OF VARIOUS COMBINATIONS OF COURSES**A. Two-Course Program Without Business Machines (Clerical Practice 20 — Office Practice 30)**

The suggested minimum units are as follows:

(See units which follow on the next page)

Clerical Practice 20 — 1, 2, 4, 5, 6, 7, 13, 14, 21, 24.

Office Practice 30 — 3, 10, 11, 12, 15, 16, 17, 18, 19, 20, 22, 23, 24.

Other units could be chosen as enrichment for more capable students at the teacher's discretion.

B. Two-Course Program With Business Machines (Clerical Practice 20 — Office Practice 30)

The suggested minimum units are as follows:

(See units which follow below)

Clerical Practice 20 — 1, 2, 4, 5, 6, 7, 8, 9, 13, 14, 21, 24.

Office Practice 30 — 3, 8, 9, 10, 11, 12, 15, 16, 17, 18, 19, 23.

C. One-Course Program

1. **Clerical Practice 20** — The needs of the non-typing or weak typist can be met by Clerical Practice 20 as a terminal course. Student assignments will be created by hand. Thus, working papers and workbook must be selected with this in mind. Penmanship should receive adequate attention. Suggested minimum units are as follows:

(See units which follow below)

1, 2, 3, 4, 5, 6, 12, 13, 14, 16, 17, 18, 19, 23

or

2. **Office Practice 30** — This course is suggested for the smaller high school and those schools offering a one-year special program. The selection of topics will be based on the needs of the students and consideration of materials covered in the typewriting program.

Suggested minimum units are as follows:

2, 3, 4, 6, 7, 10, 11, 12, 13, 15, 17, 18, 19, 23.

(See units which follow below)

UNITS OF INSTRUCTION

1. Personality Traits and Work Habits

Awaken in the student a realization of his responsibility to the employer through this unit.

2. Filing — Alphabetic System

Stress should be laid on accuracy in training of clerical filing.

3. Filing — Other Systems

Numeric, Direct Name, Subject, Geographic, Soundex, etc.

4. Telephone and Related Equipment

Where equipment is available much practice should be given.

5. The Receptionist

Develop skills here, particularly in the classes with clerical students.

6. Mailing

The mail clerk is an initial position for beginning clerical workers in many companies.

7. Office Machines — General

- a) Spirit Duplicator
- b) Stencil Duplicator
- c) Off-set Duplicator
- d) Copiers — various makes.

The instruction should be aimed at teaching the students how to prepare accurate, neat and well-planned stencils and master copies. Considerable practice should be experienced by all typists at least by their final year.

- e) Miscellaneous equipment and supplies.

8. Office Machines — Calculating

- a) Full Keyboard Adding-Listing
- b) Ten-Key Adding-Listing
- c) Key Driven Calculator
- d) Rotary
- e) Others.

This unit should be concerned with accurate and rapid addition and subtraction. Simple multiplication on "c" and "d". Practical applications should be introduced whenever possible. Keep in mind clerical arithmetic. Students registered in Bookkeeping 10 and 20 should be encouraged to utilize the business machines for additional practical work.

9. Office Machines — Calculating

- a) Rotary
- b) Key Driven
- c) Printing Calculator
- d) Others.

The four fundamentals at rapid and accurate speeds. Percentage and decimal applications to a reasonable level of proficiency. Practical problems should be used throughout.

10. Office Machines — Recording and Transcribing Units

Some form of rotation plan should be designed in conjunction with 8 and/or 9 above.

11. Business Letters and Manuscripts

The teacher should consult with the teachers of typewriting and English before embarking on this unit to minimize overlapping of instruction.

- a) Mechanics and details of typing letters and manuscripts
- b) Sections of a manuscript
- c) Footnotes and bibliography
- d) Composing letters and manuscripts
- e) Types of letters and manuscripts.

12. Using Correct English

A cooperative arrangement with the teachers of English should be established for this area.

- a) Business speech — voice, pronunciation, etc.
- b) Grammar
- c) Spelling and word choice
- d) Punctuation
- e) Capitalization, abbreviations and numbers.

13. Banking

The forms and procedures should be studied in some detail. A complete set of forms should be available to each student.

14. Clerical Merchandising

If Merchandising is taught in the school, some cooperative arrangement should be worked out in this area.

- a) Activities of buying
- b) Receiving and stockkeeping
- c) Selling
 - wholesale
 - retail

- d) Shipping
- e) Credit and collection.

Along with the theory and processes, the students should be able to understand and handle the forms in all the above areas. The selection of a good workbook would aid greatly.

15. Telegraph, Cable and Radio Services
Practical applications here.

16. Interviewing Callers
This is in more detail than #5 above.

17. Financial Duties

This unit is aimed toward the secretarial student who may enter business in the small office. The handling, recording and reconciling of cash is the important feature. It could be considered as an enrichment to #13. Students who have not studied bookkeeping should select this, whereas, those who have had the bookkeeping course could omit the section.

18. Sources of Information
 a) English usage and style
 b) General information
 c) Typical uses of reference books
 d) Institutional and current sources.

19. Transportation of Goods
 a) Services
 b) Preparation
 c) Receiving
 d) Insurance regulations.

20. Transportation of Persons
 a) Methods
 b) Accommodations and services
 c) Hotel information
 d) Itineraries
 e) Funds.

21. Production Work
This should be under control of the teacher of office practice. It perhaps could be considered as bonus or enrichment work with credit given.
 a) School newspaper
 b) School year book
 c) Work for staff
 d) Work for Home and School Association
 e) Sundry.

22. Legal Documents
The preparation rather than the theory.

23. Seeking Employment
 a) Self-analysis
 b) Sources of job opportunities
 c) Letter of application
 d) Filling out application forms
 e) Interview
 f) Follow-up.

24. Electronic Data Processing

Aspects of data processing should be introduced where and whenever possible. The teacher of office procedures should begin to establish a file of materials relative to this area and continue to update it.

RECORD KEEPING 10**Objectives**

1. To develop an understanding of, and an appreciation for good records in personal finance, in social organizations and in single-proprietorship business of trading and non-trading concerns.
2. To develop familiarity with common business terms and their uses.
3. To inculcate habits of neatness, accuracy, and legibility.
4. To provide a course in record keeping that will build interests and discover the aptitudes of the students in this subject.

Primary References

Sparling, *Canadian Record Keeping Practice*, 2nd Edition, 1972, McGraw-Hill Ryerson Limited.

Workbook (Optional)

Workbook to accompany text, contains the forms to use in completing the exercises in record keeping.

Practice Materials

One or more to be selected.

- (a) Roman and Finch, *Family Financial Management*, 2nd Edition, 1969, G136, Gage Educational Publishing Limited.
- (b) Baggett, *Tele-Rad Repair Company*, 1966, B025, Gage Educational Publishing Limited.
- (c) Fritz, *Service Station Recordkeeping*, 1968, 22474, McGraw-Hill Ryerson Limited.

Scope for Each Course

Five-credit Course — All Concepts and Subconcepts

Three-credit Course — Concept I, Subconcepts A, B.

Concept II, Subconcepts A, B, C.

Concept III, Subconcepts A, B or C (b).

Course Content**CONCEPT I. IMPORTANCE OF RECORD KEEPING**

Subconcepts:

- A. Business and Individual Records
 - (a) Purposes
 - (b) Importance
 - (c) Qualities for record keeping

- B. Basic Skills Needed for Record Keeping
 - (a) Penmanship
 - (b) Arithmetic
 - (c) Reading
 - (d) Copying
 - (e) Arranging
 - (f) Filing

CONCEPT II. TYPICAL RECORDS

Subconcepts:

- A. Sales Records
 - (a) Receipts
 - (b) Sales Slips
 - (c) Sales Taxes
 - (d) Invoices
- B. Handling Cash
 - (a) Tools used (cash box, drawer, register)
 - (b) Receiving and paying cash
 - (c) Cash proof
- C. Banking
 - (a) Types and functions of bank accounts
 - (b) Bank forms (passbook, signature card, statement)
 - (c) Reconciliation
 - (d) Endorsements
 - (e) Loans
- D. Payroll
 - (a) Methods of payment
 - (b) Procedures
 - (c) Deductions
- E. Stock Records
 - (a) Importance
 - (b) Types

CONCEPT III. APPLICATIONS

Subconcepts:

- A. Personal and Family Records
- B. Social Organizations' Financial Records
- C. Business Enterprises
 - (a) Balance sheet, income statement, and ledger accounts
 - or (b) One or more practice sets

SHORTHAND

Schools may offer the following courses in shorthand using any one of three systems — Forkner (alphabetic), Gregg (symbolic) or Pitman (symbolic) — in English (or in French if operating under Section 150 of The School Act).

General Objectives of Shorthand

1. To provide the opportunities for students to develop the ability to write shorthand and transcribe at a level that meets initial employment standards.

2. To provide the opportunities for students to develop an understanding of the business environment, employment requirements, and standards of behaviour acceptable to the business community.
3. To provide an educational setting wherein the student has opportunity to apply the learnings from other disciplines with special emphasis on communication skills.

Suggested Minimum Standards

Shorthand 20	— write practiced material dictated at 70 w.p.m.
	— write unpracticed material dictated at 50 w.p.m.
Shorthand 30	— write practiced material dictated at 90 w.p.m.
	— write unpracticed material dictated at 80 w.p.m.
Shorthand 31	— write practiced material dictated at 80 w.p.m.
	— write unpracticed material dictated at 70 w.p.m.

SHORTHAND 20

Primary References

Forkner (English) — *Forkner Shorthand*, Forkner et al, (Canadian Edition)
Forkner Publishing Co.

Forkner (French) — *La Sténographie Forkner*, Mme Lynn Hayes, Gage,

Gregg (English) — *Gregg Shorthand*, Diamond Jubilee Series, Canadian
Edition, Gregg, Leslie, Zoubek, McGraw-Hill Ryerson.

Gregg (French) — *Sténographie Gregg*, Collection 75e, Sister Marie Ernestine,
McGraw-Hill Ryerson.

Pitman (English) — *New Basic Course in Pitman Shorthand*, Sir Isaac
Pitman and Sons Ltd.

or

Pitman Shorterhand, Reid and Thompson, Sir Isaac Pitman Limited, and
Writing and Transcription Skill Development, Reid, Thompson and Scott,
Sir Isaac Pitman Limited.

Pitman (French) — *Méthode Moderne de Sténographie Pitman*, Sir Isaac
Pitman and Sons Ltd.

Specific Objectives of Shorthand 20

The student should be able.

1. to demonstrate mastery of the principles of shorthand theory through response to the dictation of basic textbook vocabulary.
2. to read fluently from engraved plate shorthand and from his own notes.
3. to write in shorthand and transcribe practiced material dictated at a minimum of 70 w.p.m.
4. to write in shorthand unpracticed material dictated at a minimum rate of 50 w.p.m.
5. to use the tools and materials of writing and transcribing in an efficient manner.
6. to work cooperatively and congenially with others, and to accept responsibility for completion of a task.

Scope and Sequence (English or French)

Forkner — Complete coverage of the text.

Gregg — Complete coverage of the text through the seventy lessons with special emphasis on the brief forms.

Pitman — Coverage of Lessons 1 to 55 in the *New Basic Course* with special emphasis on the short forms, pages 148-151. Lessons 56-60 and additional letters commencing page 152 can be considered as enrichment material.

'73

or

Coverage of the texts *Pitman Shorthand* and at least the first 18 lessons in *Writing and Transcription Skill Development*.

In all systems, transcription practice should be introduced early in the course. Unpracticed new dictation and transcription should have prominence in the latter part of the course.

Optional Materials

Forkner (English) — *Study Guide for Forkner Shorthand* (Canadian Edition).
Forkner Shorthand Outlines for the Business Vocabulary, Farmer and Lore, Gage.

Teacher's Manual for Forkner Shorthand (Canadian Edition)

Gregg (English) — Workbook to accompany the text.

Gregg Shorthand Dictionary, Diamond Jubilee Series.

Student Transcript for Gregg Shorthand, Diamond Jubilee Series.

Instructor's Handbook for Gregg Shorthand.

Key to Workbook for Gregg Shorthand.

Gregg (French) — *Transcription de la Sténographie*.

Dictionnaire de Sténographie.

Exercices de Sténographie Gregg.

Livre du Maître qui accompagne Exercices de Sténographie, Gregg.

Pitman (English) — *Student's Shorthand Dictionary and Phrase Book*: Pitman.

Pitman Shorterhand Dictionary.

Key to New Basic Course in Pitman Shorthand.

Pitman (French) — *Key to Méthode Moderne de Sténographie*.

SHORTHAND 30

Primary References

Forkner (English) — *Correlated Dictation and Transcription*, Forkner edition, Forkner et al, Forkner Publishing Co. (distributed by Gage Educational Publishing Ltd.).

Forkner (French) — *La Stenographie Forkner*, Mme Lynn Hayes, Gage Educational Publishing Limited.

Gregg (English) — *Gregg Dictation*, Diamond Jubilee Series, Canadian Edition, Leslie, Zoubek and Stroney.

or

Gregg Transcription, Diamond Jubilee Series, Leslie and Zoubek.

Gregg (French) — *Vitesse Progressive en Sténographie*, Gregg: Sr. M. Ernestine.

Pitman (English) — *Correlated Dictation and Transcription*, Pitman edition, Forkner, Osborne, O'Brien and

Basic Dictation, Duchan, Sir Isaac Pitman and Sons Publishers.

or

Shorterhand Skills for the Future, Reid, Thompson, Scott, Sir Isaac Pitman Limited; and *Correlated Dictation and Transcription*, Pitman edition.

Pitman (French) — *Méthode Moderne de Sténographie*, Pitman.

Specific Objectives of Shorthand 30

The student should be able:

1. to demonstrate mastery of writing a general business vocabulary in shorthand.

2. to write in shorthand and transcribe practiced material dictated at a minimum of 90 w.p.m.
3. to write in shorthand and transcribe unpracticed material dictated at a minimum of 80 w.p.m.
4. to use the tools and materials of writing and transcribing shorthand in an efficient manner.
5. to demonstrate good work habits and behaviour compatible with business standards.

Scope and Sequence (English or French)

In all systems there must be reinforcement of the theory from the Short-hand 20 text, coverage of the prescribed text, and further upgrading of transcription skills with emphasis on dictation of unpracticed material.

Optional Materials

Forkner (English) — Study Guides and Text Manual for *Correlated Dictation and Transcription*, Forkner Edition.

Teacher's Manual and Key to Correlated Dictation and Transcription, Forkner Edition.

Forkner Shorthand Outlines for the Business Vocabulary, Farmer and Lore, Gage.

Gregg (English) — *Transcription Workbook for Gregg Dictation*.

Workbook for Gregg Transcription.

Gregg Dictionary.

Student Transcript, Gregg Dictation.

Student Transcript, Gregg Transcription

Instructor's Handbook for Gregg Dictation.

Instructor's Handbook for Gregg Transcription.

Key to Workbook for Gregg Transcription.

Key to Transcription Workbook for Gregg Dictation — Leslie, 1st Edition.

Gregg (French) — *Transcription des Exercices de Vitesse Progressive*, Gregg. *Dictionnaire de Sténographie*, Gregg.

Pitman (English) — *Student's Shorthand Dictionary and Phrase Book*: Pitman.

Pitman Shorterhand Dictionary.

Key Points to Success, M. Silcox, Pitman.

Manual and Key to Correlated Dictation and Transcription, Forkner, Osborne and O'Brien.

Key to Basic Dictation, Duchan.

Pitman (French) — *Key to Méthode Moderne de Sténographie*, Pitman.

SHORTHAND 31

This one-year course in any one of the three shorthand systems provides an opportunity for Grade XII students who have not taken the basic shorthand program to study a shorthand system for initial job entry or continued study at a post-secondary institution.

Primary References

Forkner (English) — *Forkner Shorthand*, Canadian Edition by Forkner; Brown and Forkner.

and

Correlated Dictation and Transcription, Forkner, Osborne and O'Brien (Forkner edition).

Forkner (French) — *La Sténographie Forkner*, Mme Lynn Hayes (Gage)
 Gregg (English) — *Gregg Shorthand*, Diamond Jubilee Series, Canadian edition, Gregg, Leslie, Zoubek.

and

Gregg Dictation, Diamond Jubilee Series, Canadian edition, Leslie, Zoubek and Stroney.

Gregg (French) — *Sténographie Gregg*, Collection 75e., Sister Marie Ernestine.

and

Vitesse Progressive en Sténographie, Gregg. Sr. M. Ernestine.

Pitman (English) —

1. *New Basic Course in Pitman Shorthand*

and either

Correlated Dictation and Transcription.

Forkner, Osborne, and O'Brien, Pitman edition.

or

Basic Dictation, Duchan.

or

2. *Pitman Shorterhand*, Reid, Thompson, and *Writing and Transcription Skill Development*, Reid, Thompson, Scott, and *Shorterhand Skills for the Future*, Reid, Thompson, Scott, Sir Isaac Pitman Limited.

Pitman (French) — *Méthode Moderne de Sténographie*, Pitman.

Specific Objectives of Shorthand 31

The student should be able:

1. to demonstrate mastery of the principles of shorthand theory through response to the dictation of basic textbook and general business vocabulary.
2. to read fluently from engraved plate shorthand and from his own notes.
3. to write and transcribe practiced material dictated at a minimum of 80 w.p.m.
4. to write in shorthand and transcribe unpracticed material dictated at a minimum of 70 w.p.m.
5. to use the tools and materials of writing and transcribing shorthand in an efficient manner.
6. to demonstrate good work habits and behaviour compatible with business standards.

Scope and Sequence (English and French)

Forkner — Coverage of the theory text. Selected use of *Correlated Dictation and Transcription*.

Gregg — Coverage of the theory text, *Gregg Shorthand* and *Gregg Dictation*.

Pitman — Coverage of Lessons 1-55 of theory text with special emphasis on Shortforms, pages 148-151. Cover Units 1-35 of *Correlated Dictation and Transcription* or Units 1-35 from *Basic Dictation*, Duchan.

or:

Coverage of the three Shorterhand texts.

Dictation and transcription from new unpracticed material should have prominence in the latter part of the course. French instruction should be supplemented with English materials.

Optional Materials

Forkner (English) — *Forkner Shorthand Outlines for the Business Vocabulary*, Farmer, Lore, (Gage).

Study Guide and Test Manual for Correlated Dictation and Transcription.
Teacher's Manual and Key Correlated Dictation and Transcription.

Study Guide for Forkner Shorthand 4th Edition.

Teacher's Manual for Forkner Shorthand 4th Edition.

Forkner (French) — *La Sténographie Forkner*, Mme Lynn Hayes (Gage).

Gregg (English) — *Gregg Shorthand Dictionary*, Diamond Jubilee Series, Canadian Edition.

Student Transcript for Gregg Shorthand, Diamond Jubilee Series, Canadian Edition.

Student Transcript Gregg Dictation (94567).

Student Workbook for Gregg Shorthand, Diamond Jubilee Series, Canadian Edition.

Key to Workbook for Gregg Shorthand.

Instructor's Handbook for Gregg Shorthand.

Transcription Workbook for Gregg Dictation (37309).

Key to Workbook for Gregg Dictation (37312).

Instructor's Handbook for Gregg Dictation (37307).

Gregg (French) — *Transcription de la Sténographie*.

Dictionnaire de Sténographie.

Exercices de Sténographie Gregg.

Livre du Maître qui accompagne *Exercices de Sténographie*, Gregg.

Transcription des Exercices De Vitesse Progressive, Gregg.

Pitman (English) — *Student's Shorthand Dictionary and Phrase Book*: Pitman.

Key Points to Success, M. Silcox, Pitman Canada Limited.

Manual and Key to Correlated Dictation and Transcription, Forkner, Osborne and O'Brien.

Key to Basic Dictation, Duchan.

Pitman (French) — *Key to Méthode Modern de Sténographie*, Pitman.

TYPEWRITING 10

Instruction in English

Primary References

Lessenberry et al., *20th Century Typewriting, Elementary Course*, Ninth Edition, T31c. Gage Educational Publishing Ltd., Agincourt, Ontario.

or

Rowe et al., *Gregg Typing 191 Series*, Book I, *General Typing* (Canadian Edition), 94623-X. McGraw-Hill Ryerson, Scarborough, Ontario.

or

Rowe et al., *Typing 300*, Volume I, (Canadian Edition), 77446-3, McGraw-Hill Ryerson Limited, Scarborough, Ontario.

Scope

Lessons 1 - 100 in the *20th Century Typewriting, Elementary Course*, or

Modules 1 - 170 in *Typing 300*, Volume One
or

Lessons 1 - 84 in *Gregg Typing 191 Series*, Book I

The suggested scope for Typewriting 10 (3 credits) is the same coverage but in less depth.

'74

Suggested Evaluation of Typewriting 10

Speed and accuracy	50%
Problem and Production work	50%

Optional Materials

Workbooks and teacher's manuals to accompany the texts.

Enseignement en français

Le Manuel

Laperle, J., 99 *Leçons Dactylographie Moderne, Livre I. Dactylographie Générale*, McGraw-Hill Ryerson.

Le Contenu

Leçons 1 - 60, Livre I

Le contenu suggéré pour le programme de dactylographie 10 (3 credits) c'est 45 leçons choisies du manuel.

L'Evaluation Suggérée pour le programme de dactylographie 10

La vitesse et la précision	50%
Travail de thèmes et de production	50%

Les Matériels Facultatifs

Les cahiers d'exercices et les manuels du professeur accompagnant les manuels.

TYPEWRITING 20

Instruction in English

Primary References

Lessenberry et al., *20th Century Typewriting, Elementary Course*, Ninth Edition, T31C, Gage Educational Publishing Ltd., Agincourt, Ontario, and

Lessenberry et al., *20th Century Typewriting, Advanced Course*, Ninth Edition, T32C, Gage Educational Publishing Ltd., Agincourt, Ontario. or

Rowe et al., *Gregg Typing 191 Series, Book 2 — Office Production Typing* (Canadian Edition). 94694.9 and

Rowe et al., *Gregg Typing 191 Series, Book 2 — Office Production Typing* (Canadian Edition). 94694.9 or

Rowe et al., *Typing 300, Volume I*, (Canadian Edition) 77446-3 McGraw-Hill Ryerson.

and

Rowe et al., *Typing 300, Volume II* (Canadian Edition) McGraw-Hill Ryerson

Lessons 101 - 150 in *20th Century Typewriting*, Elementary Course.

and

Lessons 151 - 225 in *20th Century Typewriting*, Advanced Course.

or

Modules 171 - 270 in *Typing 300*, Volume One.

and

Modules 1 - 75 in *Typing 300*, Volume Two.

or

Lessons 85 - 144 in *Gregg Typing 191 Series*, Book I.

and

Lessons 1 - 36 in *Gregg Typing 191 Series*, Book II.

Suggested Evaluation of Typewriting 20

Speed and Accuracy	40%
Problem and Production Work	60%

Optional Material

Workbooks and teacher's manuals to accompany the texts.

Enseignement en français

Manuels

Laperle, J., 99 *Leçons Dactylographie Moderne*; Livre 1, *Dactylographie Générale*, McGraw-Hill Ryerson.

et

Laperle, J., 99 *Leçons Dactylographie Moderne*; Livre 2, *Dactylographie Professionnelle*, McGraw-Hill Ryerson.

Le Contenu

Leçons 61 - 90 de Livre 1

et

Leçons 1 - 72 de Livre 2

L'Evaluation Suggérée pour le programme de dactylographie 20

La vitesse et la précision	40%
Travail de thèmes et de production	60%

Les Materiels Facultatifs

Les cahiers d'exercices et les manuels du professeur accompagnant les manuels.

TYPEWRITING 30

Instruction in English

Primary References

Lessenberry et al., *20th Century Typewriting, Advanced Course*, Ninth
31b

Edition, T32C, T50, Gage Educational Publishing Ltd.

or

Rowe et al., *Gregg Typing 191 Series*, Book 2 — *Office Production Typing* (Canadian Edition). McGraw-Hill Ryerson Ltd., Scarborough, Ontario.

or

Rowe et al, *Typing 300*, Volume II (Canadian Edition) McGraw-Hill Ryerson.

Scope

Lessons 151 - 225 in *20th Century Typewriting, Advanced Course*.

or

Modules 76 - 270 in *Typing 300*, Volume Two.

or

Lessons 37 - 144 in *Gregg Typing 191 Series*, Book II.

Optional Material

Workbooks and teacher's manuals to accompany the texts.

Enseignement en français

Le Manuel

Laperle, J., 99 *Leçons de Dactylographie Moderne*, Livre 2, Dactylographie Professionnelle, McGraw-Hill Ryerson.

Le Contenu

Leçons 73 - 90 de Livre 2 Partie Anglaise.

et

Travail Supplémentaire.

L'Evaluation Suggérée pour le programme de dactylographie 30

La vitesse et la précision	20%
Travail de thèmes et de production	80%

Les Matériaux Facultatifs

Les cahiers d'exercices et les manuels du professeur accompagnant les manuels.

D R A M A

Alternative Program — New Course

PRELIMINARY STATEMENT

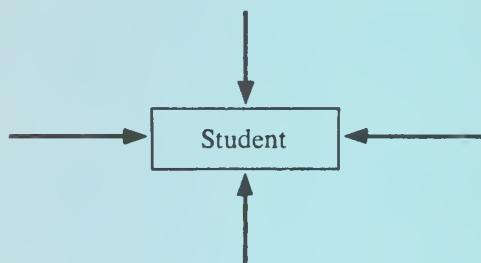
Dramatic activity involves the whole person — the development of the individual through experience and expression of his creative self—in movement, mime, dance, improvisation or the scripted play.

All drama—and we use the term to include not only formal theatre but the study of improvisation, pantomime, film, television, media shows, dance, opera, radio plays, etc.—*can be creative*—if presented in such a way that the full resources of each individual are challenged.

The Secondary School Drama Curriculum from Grades VII to XII is predicated on the belief that drama must begin with development of the creative faculties of the student. From this base the course is built progressively in order to obtain for the student at the advanced level the broadest possible theatrical experience, for example, play production, critical viewing of theatre, film, television, film production, etc. Therefore, teachers should note that this program of studies differs from the previous one in that the program is not developed through five or six grades but through *three levels*.

Level 1

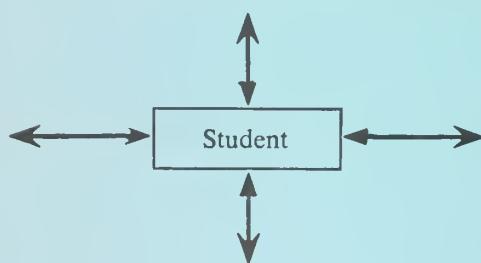
Initial—development of creative faculties.



THE ARROWS INDICATE A FLOW of experiences provided by the teacher to develop personal resources and lay foundations for further creative exploration.

Level 2

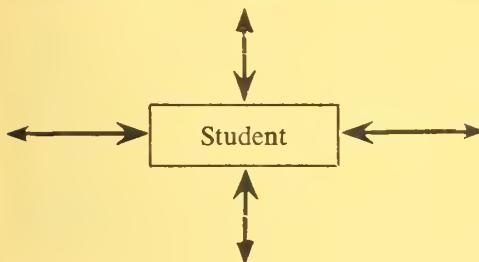
Intermediate—enrichment of creativity and a growing awareness of art form which may include the limited theatre experience.



The two-way process of student-teacher shared responsibility for further development and growing awareness of theatre form.

Level 3

Advanced—continuing development of creative faculties plus theatre experience.



The student should now be able to participate in advanced theatre form and utilize his inner resources to share a meaningful experience with an audience.

IN THE JUNIOR HIGH SCHOOL AND IN DRAMA 10 IT IS EXPECTED THAT THE DRAMA PROGRAM WILL DRAW FROM THE INITIAL AND INTERMEDIATE LEVELS.

INITIAL LEVEL

The uniqueness of each person is his individuality and in this—whether it be academic, technical, creative, or a combination of all three—he should not be compared with any other person. Drama is concerned with developing this uniqueness and helping each person to discover and to reach his own potential. A well-structured program which provides for creative experience on the part of the student, can develop within the student an awareness of the world, empathy with others, concentration, imagination, physical confidence, emotional control, expressive oral communication, self-discipline and tolerance. Drama has a unique contribution to make in the emotional and intuitive development of the student as the academic disciplines have in his intellectual development.

The objectives of the Initial Level are, therefore, **not** theatre oriented but concentrate on the development of the student's own resources.

Statement of Objectives

1. TO DEVELOP CONCENTRATION
2. TO DEVELOP SENSORY DISTINCTION
3. TO OBTAIN FREEDOM AND CONTROL IN PHYSICAL MOVEMENT
4. TO DEVELOP IMAGINATION
5. TO ESTABLISH FOUNDATIONS FOR FURTHER EXPLORATION IN CREATIVE EXPERIENCE
6. TO DEVELOP AN AWARENESS OF THE WORLD TODAY THROUGH AN UNDERSTANDING OF TODAY'S MEDIA AND THE RESPONSIBILITY OF MEDIA TO SOCIETY

It is intended that some or all of the units be used, each being developed to a greater or lesser extent, to provide a variety of experience. However, it is possible for a teacher to emphasize **one** of the units and develop it over a period of a semester or year, as these units are based on the premise that teachers teach best what they know and what they feel most confident in.

Units

The activities for each of the following units are based upon the six parts of the Statement of Objectives.

CREATIVE SPEECH—The dynamic and confident use of language to communicate original and interpretive thoughts and ideas, the emphasis being on individuality rather than on the acquisition of technical skills.

DRAMATIC LITERATURE AS A CREATIVE EXPERIENCE—The study of plays, radio scripts, television scripts, themes of films, etc., as a medium of communication of thoughts, feelings, ideas, **not as an academic analysis**; i.e., the play or film produced—the story told, the characters portrayed.

MEDIA AS A COMMUNICATIVE ART—A study through a variety of experiences of contemporary media (television, films, radio, newspapers, etc.) to develop an awareness and appreciation of the contribution of these changing forms in society.

IMPROVISATIONAL THEATRE—Improvisation means a situation, story, play without a script; such a situation, story, play can be told with or without words. The emphasis in this initial level is on movement improvisation rather than the extensive use of improvised dialogue, which is a more complex and advanced form of improvisation.

LINKING DRAMA WITH OTHER CREATIVE ARTS—The intention of this unit is to offer the drama teacher a variety of approaches through utilization of aspects of other creative arts, thus emphasizing the strong interaction amongst all the arts.

Recommended Teacher Reference:

Way, Brian. *Development Through Drama*. Longman Canada Ltd.

INTERMEDIATE LEVEL

Preliminary Statement

The Intermediate Level is an extension and further development of the objectives stated for the Initial Level. These objectives are:

1. To develop concentration
2. To develop sensory distinction
3. To obtain freedom and control in physical movement
4. To develop imagination
5. To establish foundations for further exploration in creative experience
6. To develop an awareness of the world today through an understanding of today's media and the responsibility of media to society.

At this level is added:

7. To channel individual creative resources into group activities and develop an awareness of dramatic form.

It is expected that the student at the Intermediate Level has had the benefit of a year or two at the Initial Level. Therefore, this program, or any part of it, will not be incorporated into Grades VII or VIII. It is also expected that the material covered in the Curriculum Guide to the Initial Level will be referred to regularly and used frequently at the Intermediate Level. It bears repeating that the total program presupposes that the dramatic experience is built on the very firm base of the student's development of his own resources. Therefore, at the teacher's discretion, a unit or units from the Initial Level may be adapted for use with "experienced" students, if the teacher believes that they are not properly prepared to benefit from the more sophisticated outlook of the Intermediate Level. It is also possible to use material from the Intermediate Level while continuing to use the individual-centred method of the Initial Level. Teachers should not commit students to the group-centred approach until the students are ready for it.

The material in the Intermediate Level is presented through the means of three major units, each of which involves a progressive series of group projects designed to stimulate interest in various aspects of theatre art. The emphasis throughout is on an improvisational approach with each unit involving, to a greater or lesser degree, elements of the five units introduced into the Initial Level Guide.

Again, it is hoped that the teacher will make use of all three units during the course, although this is not mandatory. There is a shift in emphasis from individual work to group work intended to develop the student's ability to communicate, first with the group, and then with an audience. It is desirable, therefore, that, during the course of this level, much more of the student's work be presented for the class; that through class discussion the strengths and weaknesses of the work done is analyzed; that some exercises will be developed to a more finished state for viewing by other classes or small assemblies; that, in short, opportunities for a closed (i.e. classmates, other classes, invited friends and parents) audience situation exist.

Outline of Units

Three areas of emphasis, which are interrelated, each incorporating the other two, are suggested. Since the Intermediate Level is a bridge between the Initial Level and the Advanced Level, the projects included within each area indicate a progression in complexity and sophistication, culminating in limited theatre experience.

IMPROVISATIONAL THEATRE—The devising and developing of improvised movement and speech plays (with form, structure, discipline implied). This does not exclude the use of source material from literature both as stimulus and as framework; likewise, media provides both stimulus and enrichment to the improvised play.

For example:

- planned, rehearsed improvisation of situations, scenes and short plays
- planned, rehearsed dance dramas
- use of light, sets, projected and other scenery etc. to stimulate and/or enhance improvisations and dance drama
- poetry (various kinds) to create a movement, sound and light collage.
- descriptive prose (various kinds) linked with movement, sound, light etc. to create a dramatic statement.
- dramatisation of short stories
- play building from a theme, involving production as a culminating project of a short play for presentation in a closed situation.

LITERATURE—The written and spoken word would be the core source material of this unit; **improvisation** would be incorporated as part of the process of developing an awareness of the art of theatre; **media** would act as enrichment.

For example:

- words, phrases, quotations as basis for collage of words, movement
- poetry (various kinds) in conjunction with sound, light and movement for enrichment
- improvised dramatisation on scenes from short stories
- original script writing, stimulated by or adapted from source material
- scenes, one-act plays used as basis for improvisation
- use of improvisation as an approach to producing scenes and short plays
- improvisation of crowd scenes from plays, novels etc.
- collage of poems, scenes, dramatisations, original writing to produce a short presentation as culminating project.

MEDIA—The exploration of media (film, projections, light) to create a piece of art implies the use of improvised movement and speech; the concept of statements, documentary type plays provide opportunities for using source material.

For example:

- exploration of light, sound, for effect to enhance improvised movement and speech plays
- use of poetry, prose, scenes as a basis for experimentation with light, sound
- exploration into film:
 - (1) as enhancement of improvisations
 - (2) as a creative art (N.B. **not** a study of Hollywood film techniques)
- exploration with video cameras using original scripted or improvised material
- use of puppets with original scripted or improvised material
- use of film, projectors, to enhance documentary drama
- short culminating project involving improvised dialogue, dance drama, original or source material (e.g. poems, scripts) as a basis for a collage of recorded sound, light, film, projected scenery as production enrichment.

ADVANCED LEVEL

Statement of Objectives

The Advanced Level is a further development and extension of the objectives of the two previous levels.

1. To encourage personal development through creative experience in:
 - (a) Concentration
 - (b) Sensory distinction
 - (c) Freedom and control in physical movement
 - (d) Imagination.
2. To motivate continued experience and training in various fields of Drama.
3. To develop an awareness of the world today through an understanding of today's media and the communication by means of these media.
4. To develop an awareness of the demands of theatre art form.

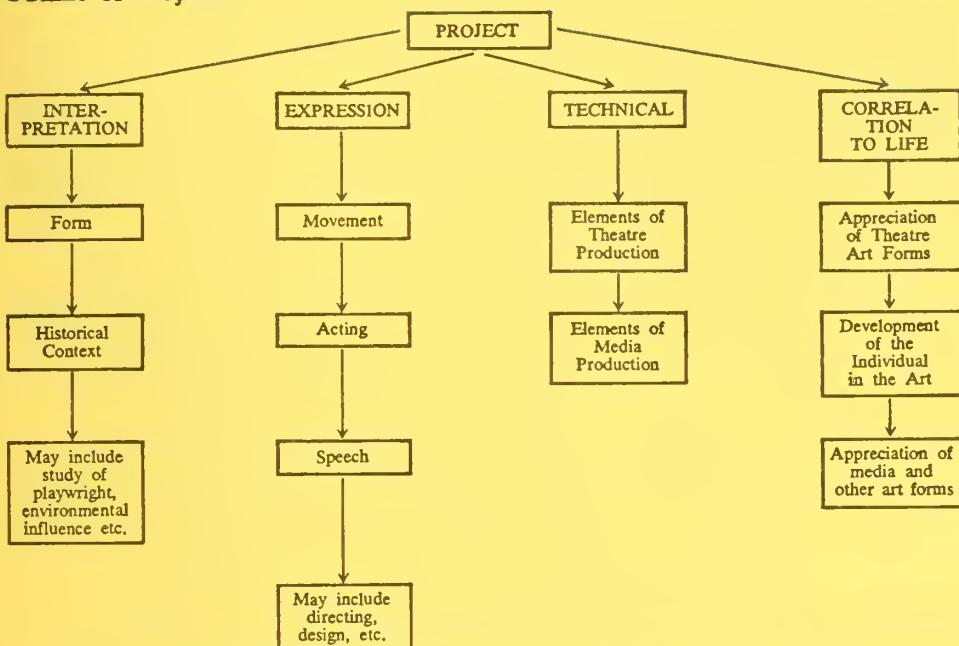
Preliminary Statement

It is assumed that the student at the Advanced Level has had a thorough grounding in the Initial and Intermediate Levels, and that, therefore, this level is intended for some form of extended dramatic experience culminating in presentation. It is expected that the teacher at the Advanced Level will refer to the aims of the Initial and Intermediate Levels, and will, by various exercises, constantly reinforce the skills developed through these two earlier levels.

At the advanced level the project has been used as the method. It is suggested that at least one major project should be undertaken as well as other minor projects. The level has been divided into major and minor projects because the full concept of dramatic form (as indicated in the chart) cannot be achieved as fully in the minor projects as in the major projects. If the form of one project precludes study in any area, this should be compensated for in the study of other projects.

The culmination of a project could be a presentation, as finished as the resources of the class and the school will permit. Whether this presentation should be to a closed or open audience must be governed by the decision of the teacher as to which type of presentation will most benefit the students involved. An open audience presentation is not mandatory.

Outline of Projects



MAJOR PROJECT—This is intended to be a study in depth including all the suggested areas of study and taking an extended period of time to complete; e.g. original presentation, scripted play, film, combination of various forms of presentation.

MINOR PROJECT—This is intended to be a study capable of culmination in a shorter period of time and not necessarily including all the suggested areas of study; e.g. puppetry, dramatic reading, radio play.

Alternative Program — Old Course DRAMA 10

Introduction

The Drama 10 Course must serve two functions: it should provide a function for the two senior courses in dramatics, but it must also be a terminal course in itself since many students will not continue with the advanced courses. Many schools that offer Drama 10 will not be offering Drama 20 and 30. It would be advisable in such schools to include a brief history of the theatre in the Drama 10 course. Probably four to six lessons would be sufficient. (*The Stage and School* by Ommanney will provide the necessary material if other references are not available.)

Text

Barnes and Sutcliffe. *On Stage, Everyone*. Brett-MacMillan Publishing Co.

Course Content

1. Acting
 - (a) Characterization—Mental
 - (b) Characterization—Physical.
2. Design.
3. Costuming.
4. Stagecraft.
5. Lighting.
6. Interest and Application.
7. Evaluation.

DRAMA 20

Drama 20 is a course for those students who have shown particular interest in or aptitude for dramatics. This course should make greater demands upon the student than did Drama 10. It is hoped that the students in this class (possibly in conjunction with the students of Drama 30) will participate in the production of a full-length play for public performance. Each student should have experience in production since production is the goal of drama study. Participation, however, need not be in an acting capacity. Wherever possible production and stagecraft tasks should be performed by the students.

Text

Barnes and Sutcliffe. *On Stage, Everyone*. Brett-MacMillan Publishing Co.

Course Content

1. Acting
 - (a) Characterization
 - (b) Techniques.
2. Production and Stagecraft
 - (a) The three-act play in relation to form, type and structure (plot, climax, theme, characterization)
 - (b) The demands of the three-act play on the various personnel involved
 - (c) The choosing of a three-act play for school production
 - (d) The analysis of the script for production and the making of the prompt script
 - (e) Stagecraft (Refer to *Play Production*, Nelms).
3. History
 - (a) Greek and Roman
 - (b) Medieval
 - (c) English Renaissance
 - (d) Restoration
 - (e) The Nineteenth Century.

DRAMA 30

Drama 30 is concerned primarily with giving individual help in any chosen field of theatre activity. Each student should be taken as far as possible within the limitations of time and his talents. The work of the course should be culminated in the public performance of a full length play (probably in conjunction with the Drama 20 students).

Text

Nelms. *Play Production*. Barnes and Noble.

Course Content

1. Acting.
2. Design.
3. Production.
4. History
 - (a) Ibsen—Realism and Fantasy
 - (b) Shavian Realism
 - (c) The Irish Movement
 - (d) The English Poetic Movement
 - (e) American Naturalism
 - (f) American Impressionism
 - (g) American Symbolism and Expression.

DRIVER EDUCATION 10

I. GUIDELINES

Credits and Reporting

Credits allotted for the course will be two (2). Enrollments and recommendations for credits should be reported by the school in the usual manner. The school should indicate the offering of the course on its Form A.

Course Description

The course will consist of:

- a. at least thirty (30) hours of classroom instruction,
- b. at least twelve (12) hours of observation of in-car practice, and
- c. at least eight (8) hours of in-car practice.

Instruction

Classroom instruction must be done by a certificated teacher.

In-car observation and practice may be conducted by a certificated teacher or a non-certificated individual but must comply with the Regulations under the Highway Traffic Act which are available through the Queen's Printer.

In order to conduct in-car observation and practice, a certificated teacher needs to:

- a. Hold a valid Alberta Class "1" or Class "2" or Class "4" Operator's License (or the old Class "A" Operator's License)
- b. Pass an examination given by the Motor Vehicle Branch covering
 - (1) Traffic laws
 - (2) Safe driving practices
 - (3) Operation of Motor Vehicles
 - (4) Knowledge of teaching methods, techniques or practices.

In order to conduct in-car observation and practice, a non-certificated individual (teacher aide) needs to:

- a. Hold a valid Alberta Class "1" or Class "2" or Class "4" Operator's License (or the old Class "A" Operator's License)
- b. Pass an examination given by the Motor Vehicle Branch covering
 - (1) Traffic laws
 - (2) Safe driving practices
 - (3) Operation of Motor Vehicles
 - (4) Knowledge of teaching methods, techniques or practices
- c. Take a driver training course of at least 30 hours acceptable to the Department of Education.

Classroom instruction, in-car observation and in-car practice should be carefully coordinated by school authorities who have the responsibility of recommending students for credits.

Student

The student involved in Driver Education 10 must:

- a. be at least fourteen (14) years of age,
- b. possess an Operator's License or a valid Learner's Permit issued by the Motor Vehicle Branch, Department of Highways,
- c. have written consent of parent or guardian, and
- d. be enrolled in an approved High School.

School

The school must secure School Board's approval in order to offer the course.

School Board

The School Board must:

- a. carry insurance coverage as follows:
"Passenger Capacity"—For injury or death of any one person as a result of any one accident in accordance with the provisions of the Highway Traffic Act,
- b. arrange for training cars, and
- c. finance the cost in any way deemed appropriate.

II. GENERAL OBJECTIVES

1. To develop in students attitudes of safety, courtesy, and responsibility in the operation of a motor vehicle.
2. To provide a practicum for the development of the skills of driving an automobile.
3. To familiarize students with the various laws, regulations and traffic control devices involved in driving.

III. TEXTUAL MATERIALS

Student Text and References:

- a. *Sportsmanlike Driving*. 2nd Canadian edition. Canadian Automobile Association (McGraw-Hill).
- b. *Practice Driving Guides*. For use with *Sportsmanlike Driving*.

IV. UNITS OF STUDY

1. The Driver and Society
2. The Driver and Specific Elements of Society
3. The Individual Driver
4. The Driver and the Car
5. Driving Techniques
6. Conditions and Driving Skills
7. Causes of Traffic Accidents and Economic Loss
8. New Approaches to Reduction of Traffic Accidents (30 hours)

V. OBSERVATION OF IN-CAR PRACTICE (12 hours)**VI. IN-CAR PRACTICE (8 hours)**

ECONOMICS 30

Recommended Text:

Trimble. *Understanding The Canadian Economy*. Revised edition. Copp Clark Publishing Co.

Content of Course:

- Unit I.: Introduction to Economics
- Unit II.: Money and Banking
- Unit III.: National Accounts and Business Cycle
- Unit IV.: Public Finance
- Unit V.: Social Services
- Unit VI.: Distribution of Income
- Unit VII.: Demand and Supply
- Unit VIII.: The Business Unit
- Unit IX.: Policies of the Individual Firm
- Unit X.: International Trade
- Unit XI.: Personal Finance
- Unit XII.: Labour
- Unit XIII.: Agriculture
- Unit XIV.: Forms of Economic Organizations
- Unit XV.: Underdeveloped Countries

LANGUAGE ARTS

Objectives

To develop the ability to communicate with increasing maturity, logic and clarity in speech, writing, and in closely associated expressive arts.

To develop the ability to listen, view, speak, read and write insight, discrimination and imagination for the end result of personal satisfaction and enjoyment.

To examine a variety of expressed thought with a view to understanding and responding to mankind's values, customs and traits, and consequently, developing a value system with which to make decisions and to live.

To encourage an appreciation of the impact of changes in style, media, and social influence upon the developing English language.

Note:

For an expansion of the foregoing objectives and identification of related skills, refer to the *Secondary Language Arts Handbook*. The statement in the handbook represents the basic objectives and skills for all language arts courses at the junior and senior high school levels.

CORE COURSES ENGLISH 13

Introduction

English 13 is a 5 credit course with the emphasis on the skills of listening, reading, speaking, viewing and writing as they relate to the needs of everyday life, with every attempt being made to integrate these areas. Through the use of a wide variety of appropriate materials, students are expected to increase both their interest and skill in understanding and interpreting ideas, and in expressing them in clear, accurate, effective speech and writing. Either this course or English 10 may serve as a prerequisite to any grade XI course in English.

Course Content

The following content areas are to be integrated:

- A. Listening Activities
- B. Reading Activities
- C. Speaking Activities
- D. Viewing Activities
- E. Writing Activities

Recommended Texts

- A.—Cline, Joy, Ken Williams, and Dan Dolan. *Voices in Literature, Language and Composition, Book 2*. Toronto: Ginn & Co., 1968
- B.—Novels — One or more from the recommended titles included in the list, Grade X Novels. See Section F of the *Secondary Language Arts Handbook*.
- C.—Modern plays — One or more from the recommended titles in the list, Grade X Plays. See Section F of the *Secondary Language Arts Handbook*.

Optional

- D.—Poetry to be chosen from one or more of the following:

Corbin, R. *Currents in Poetry*.

Eckersley, William. *Impact*.

Metcalfe, J. and G. Callaghan. *Rhyme and Reason*. Toronto: The Ryerson Press.

Rittenhouse, C. et al. *Words on Wings*.

Rutledge, D. *The Blue Guitar*.

Smiley, M. B. (Director). *Stories in Song and Verse*.

Summerfield, G. *Voices I*

Weir, C. *Steel and Summer Rain*.

- E.—Non-Fiction (Optional) — Select one or more titles from the recommended list entitled, Grade X Non-Fiction, in Section F of the *Secondary Language Arts Handbook*.

ENGLISH 10**Introduction and Course Content**

English 10 is a 5 credit matriculation course which attempts to correlate literature and language through integrating language techniques and communication skills with a study of the short story, the novel, non-fiction, the full-length modern play and a Shakespearean play. Either this course or English 13 may serve as a prerequisite to any grade XI course in English.

Recommended Texts**A.—Language**

Fleming, Harold, and Allan Glatthorn. *Composition: Models and Exercises 10*. New York: Harcourt, Brace & World, Inc. 1965.

B.—Prose1. **The Short Story**

A minimum of ten to be selected for class study and/or independent reading.

Maline, J. L. and James Berkley (eds.). *Approaches to Literature, Vol. I: Studies in the Short Story*. New York: Random House, Inc., 1967.

2. **The Novel**

At least one to be studied from the recommended titles included in the list, Grade X Novels. See Section F of the *Secondary Language Arts Handbook*.

C.—Non-Fiction (Optional)

If time and student interest permit, choose one or more from the recommended titles included in the list, Grade X Non-Fiction. See Section F of the *Secondary Language Arts Handbook*.

D.—The Full-Length Modern Play

If time and student interest permit study one or more of the plays from the recommended titles included in the list, Grade X Plays. See Section F of the *Secondary Language Arts Handbook*.

E.—The Shakespearean Play

Choose and study one play from the recommended titles included in the list, Grade X Shakespearean Plays. See Section F of the *Secondary Language Arts Handbook*.

F.—Poetry

Eckersley, Wm. *Impact*. Don Mills, Ontario: J. M. Dent and Sons, Ltd. 1968.

or

McLuhan, M. and R. J. Shoeck. *Voices of Literature, Book 1*. Toronto: Holt, Rinehart and Winston, 1969.

ENGLISH 23**Introduction**

English 23 is a 5 credit course for non-matriculation students. The course places an emphasis upon all forms of communication.

Course Content and Recommended Texts**A.—Literature (General)**

Lynn. *The Range of Literature*. Fiction. Don Mills, Ontario: Thomas Nelson and Sons (Canada) Ltd., 1969.

Worsnop. *What Do You Think?* Toronto: Copp Clark Publishing Co., 1969.

Hogan. *Poetry of Relevance, Book 2*. Toronto, Ontario: Methuen Publications, 1970.

B.—Drama

One or more plays from the recommended titles included in the following lists:

1. Grade XI Plays

2. Grade XI Shakespearean Plays

See Section F of the *Secondary Language Arts Handbook*.

C.—The Novel

One or more from the recommended titles included in the list, Grade XI Novels. See Section F of the *Secondary Language Arts Handbook*.

D.—Non-Fiction (Optional)

Select one or more titles from the list entitled, Grade XI Non-Fiction, in Section F of the *Secondary Language Arts Handbook*.

ENGLISH 20**Introduction**

English 20 is a 5 credit matriculation course which correlates the language and literature skills in prose, poetry and drama.

Course Content and Recommended Texts**A.—Prose**

1. The Short Story

A minimum of ten.

Buxton, E. W. *Prose for Discussion*. W. J. Gage Co., 1968.

B.—The Essay

A minimum of ten.

Buxton, E. W. *Prose for Discussion*. W. J. Gage Co., 1968.

C.—The Novel

One or more novels from the recommended titles included in the list, Grade XI Novels. See Section F of the *Secondary Language Arts Handbook*.

D.—Poetry

Perrine, Laurence. *Sound and Sense*, (Second Edition). Harcourt, Brace and World, Inc.

E.—Drama (One from Section (1) or (2) be studied):

1. Modern Drama

Study one play from the recommended titles included in the list, Grade XI Plays.

2. The Shakespearean Drama

Study one Shakespearean drama from the recommended titles in the list, Grade XI Shakespearean Plays. See Section F of the *Secondary Language Arts Handbook*.

F.—Non-Fiction (Optional)

If time and student interest permit, study one or more of the publications included in the recommended list, Grade XI Non-Fiction. See Section F of the *Secondary Language Arts Handbook*.

G.—Language

Ford, Margaret. *Techniques of Good Writing*. Agincourt, Ontario: The Book Society of Canada.

ENGLISH 33**Introduction**

English 33 is a 5 credit course which is designed for Grade XII students who do not seek matriculation standing. The emphasis should be upon the improvement of fundamental reading and language skills.

Course Content and Recommended Texts**A.—Short Stories and Essays**

1. Scheld, Elizabeth. *Short Stories II*. Literary Heritage Series. Galt, Ontario: Collier-MacMillan Canada Ltd., 1961.
2. Reinert, Otto. *Working with Prose*. New York: Harcourt, Brace and World, Inc. (Longman Canada Ltd.), 1959.

B.—Novels

One or more from the recommended titles included in the list, Grade XII Novels. See Section F of the *Secondary Language Arts Handbook*.

C.—Drama

One or more plays to be chosen from the recommended titles included in the following lists:

1. Grade XII Plays
2. Grade XII Shakespearean Plays

See Section F of the *Secondary Language Arts Handbook*.

D.—Non-Fiction (Optional)

Select one or more titles from the list entitled, Grade XII Non-Fiction, in Section F of the *Secondary Language Arts Handbook*.

ENGLISH 30

Introduction

English 30 is a 5 credit course designed for students seeking matriculation.

Course Content and Recommended Texts

A.—Short Stories

Text: Perrine, Laurence. *Story and Structure*. New York: Harcourt, Brace and World, Inc., 1966.

Teacher and class will select a minimum of ten stories for class discussion and independent reading by students.

B.—Essays

Text: Buxton, et al. (Editors). *Points of View*. Scarborough, Ontario: W. J. Gage Limited, 1967.

Teacher and class will select a minimum of ten essays for class discussion and independent reading by students.

C.—Poetry

1. Text: Charlesworth and Lee (Editors). *An Anthology of Verse*. Toronto: Oxford University Press, 1964.

A number of poems to be selected for class discussion and independent reading.

2. From the following sources, one or more poets to be studied in depth:

- (a) Leggett, Glen (Editor). *12 Poets*. New York: Rinehart and Company, 1958, or Shakespeare, Donne, Pope, Wordsworth, Keats, Browning, Emily Dickinson, Housman, Yeats, E. A. Robinson, Frost, T. S. Eliot.

Introduction and notes on each poet in the following:

- (b) Chaucer: *Canterbury Tales* (Croft Classics)
- (c) Coleridge: *Selected Poems* (Croft Classics)
- (d) Donne: *Selected Poems* (Croft Classics)
- (e) Keats: *Selected Poems* (Croft Classics)
- (f) Tennyson: *Selected Poems* (Croft Classics)
- (g) Hopkins: *Selected Poems and Prose* (Penguin)
- (h) Cummings, E. E.: *Selected Poems* (Faber)
- (i) Shakespeare: *Renaissance Poetry* (Prentice Hall)
- (j) *Poets of Mid Century* (MacMillan)

D.—Novels

One or more publications from the recommended titles included in the list, Grade XII Novels. See Section F of the *Secondary Language Arts Handbook*.

E.—Modern Drama

One or more plays from the recommended titles included in the list, Grade XII Plays. See Section F of the *Secondary Language Arts Handbook*.

F.—Shakespearean Drama

One or more Shakespearean plays from the recommended titles included in the list, Grade XII Shakespearean Plays.

G.—Non-Fiction (Optional)

If time and interest permit, study one or more of the recommended titles included in the list, Grade XII Non-Fiction. See Section F of the *Secondary Language Arts Handbook*.

H.—Language

Corbin, Perrin and Buxton. *Guide to Modern English*. Scarborough, Ontario: W. J. Gage Co. Ltd., 1959.

ELECTIVES READING 10

(See the Reading 10 Curriculum Guide.)

LITERATURE 11

Literature 11 is an elective in English intended as enrichment in the study of humanities for more capable students. The core requirements are two novels, one of which will be a classic; two plays, one old and one modern; and either a biography or an autobiography. For a list of suggested materials consult Section G of the *Secondary Language Arts Handbook*.

ENGLISH LANGUAGE 21

Course Materials

No assigned text.

Material listed in Section G of the *Secondary Language Arts Handbook*.

English Language 21 is a course designed for Grade XI and XII students who are particularly talented or interested in writing. Experience suggests that such students are to be found at all levels of ability. As much individual assistance and instruction is required of the teacher, the size of the class should be limited to twenty students or fewer. In addition, as no textbook is assigned for the course, a classroom library of books and pamphlets must be made available to the teacher if the course is to be taught effectively.

Course Content

The course covers five content areas: journalism, the essay, the short story, drama and poetry. Teachers may deal with these units in any order or way which is productive of results: but at least some aspect of *all five areas* should be discussed at some time during the school term.

As some of the material discussed in English Language 21 is also found in the compulsory courses, teachers are asked to guard against uneconomical overlapping in their own particular school situations.

UNIT ONE: JOURNALISM

A.—The Writing of a News Story

1. Definition of news
2. The differences between literary and news writing
3. The news story (including the lead).

B.—Newswriting Style

1. Use of standard good English
2. Specific characteristics of newswriting style.

C.—The Writing of a Variety of News Stories

1. General news story
2. Speech report
3. Interview story
4. Sportswriting
5. Advance and follow-up stories
6. Feature stories.

D.—Editorial Writing

1. Editorials
2. Columns
3. Letters to the editor.

E.—Journalism as a Profession

1. Newspaper writing
2. Radio and television writing
3. Magazine writing
4. Advertising
5. Public relations.

UNIT TWO: THE ESSAY

A.—Definition of the Essay

1. Historical development of the essay form
2. Variety of forms.

B.—The Informational Essay

1. The research essay
2. The critical essay.

C.—The Personal Essay

1. Autobiographical
2. Reflective
3. Characterization
4. Nature
5. Satirical.

UNIT THREE: THE SHORT STORY

A.—Leading Up to the Short Story

1. The journal (or diary)
2. The personality or character sketch
3. The plot.

B.—Developing the Short Story

1. The plot outline:
 - (a) An introduction (to attract the reader)
 - (b) Details of the story (in point form)
 - (c) A conclusion (which satisfies the reader)
2. Plot analysis:
 - (a) Situation (time, place, characters, mood, circumstances)
 - (b) Rising action
 - (c) Climax
3. The twist (the unexpected turn near the end of the story)
4. Conflict.

UNIT FOUR: DRAMA

A.—Leading Up to the Writing of Drama

1. The writing of short scripts (e.g. television and radio commercials, announcements for use on an intercom)
2. The writing of five- or ten-minute scripts (e.g., informal family discussion)
3. The writing of longer scripts (e.g., school assembly program, a documentary).

B.—Dramatic Writing

1. The writing of dialogue
2. Stage movement
3. The one-act play
 - (a) Plot
 - (b) Character
 - (c) The unities of time and place
 - (d) Stage business or action
 - (e) The dialogue
 - (f) Properties.

C.—Radio and Television Writing

1. The special needs of radio writing
2. The special needs of television writing.

UNIT FIVE: POETRY**A.—The Writing of Light Verse**

1. Limerick
2. Rhyming couplets
3. Other forms.

B.—The Writing of Poetry

<ol style="list-style-type: none"> 1. The definition of poetry 2. Poetic form 3. The haiku 	<ol style="list-style-type: none"> 4. The cinquain 5. The triolet 6. A variety of forms.
---	---

C.—The Group Composition (a poem composed by the class or a group of students).**ENGLISH LANGUAGE 22**

Communicating Effectively Through Speech and Writing.

Objectives

The general purpose of the course is to enable the student to communicate his ideas clearly and emphatically in speech and in writing.

A.—Through the study of:

1. The History and Development of the Language
2. Rhetorical and Expository Techniques.

B.—And by using these techniques with new understanding in speaking and writing practice, guided by suitable oral and written models.**Recommended Texts**

Hibbs et al. *Speech For Today*. McGraw-Hill Book Company, 1965.

Kane and Peters. *Writing Prose*. Oxford University Press, 1964.

*Kane and Peters. *Writing Prose*. Third edition, 1969.

Pyles. *The English Language*. Holt, Rinehart and Winston, 1968.

Content**Unit I — The History of Speaking and Writing****A.—The Development of Speech for Communication**

1. How Speech Began
2. Formal Public Speaking
3. Development of Communication
4. Effect of Mass Media.

B.—The Development of Writing for Communication

1. The History of the Development of the English Language
 - (a) Change in Language Using Examples of Old, Middle and Modern English—
 - i. Derivations
 - ii. Historical Influences
 - iii. Geographical Influences
 - iv. Socio-economic Influences
 - (b) Brief Study of the Changing Grammars
2. A General Survey of the Varieties of Modern Writing Forms with Special Attention to—
 - (a) The Expository Forms of Letter, Essay, Article and Editorial.
 - (b) The Categories of Narration, Description, Exposition and Argument.

*In schools embarking on this course for the first time the Third Edition is recommended.

Unit II — The Principles And Practice Of Logic And Rhetoric In Spoken and Written English

The Craft of Written and Spoken English

1. Narration	3. Exposition
2. Description	4. Argument.

ENGLISH LITERATURE 21**Course Materials**

Inglis, Stauffer and Larson. *Adventures in English Literature*. Gage.

Additional material to supplement the material of the text.

Recordings, tapes, radio and television plays.

English Literature 21 is an elective designed for students in Grades XI and XII who show special interest and reasonable competence in English literature.

Objectives

1. To increase the student's power to enjoy good literature through both extensive and intensive study of representative works by the best writers.
2. To develop in the student a sense of literary perspective.
3. To assist the student to relate literary works in a mature way to the society that produced the works.

Course Content

The content of Literature 21 is indicated in a general way by the prescribed text, but individual teachers may place the emphasis differently according to the extent of their own literary scholarship, to that of their students, and to the supplementary materials available.

The sequence of the course is that followed in the text.

Adventures in English Literature begins with several short essays by recent British and Canadian authors. Following this introductory material are eight sections giving, in chronological order, the commonly-recognized periods of English literary history. It should be noted that these periods overlap somewhat, and that the division of the continuous historical process in this way is largely arbitrary; however, the historical and social introductions given in the text form a necessary skeleton for the course, and students should be familiar with their content. Some periods, authors and literary types are better represented than others. (The text is deficient, for example, in the Medieval English section where the literature given is in modern paraphrase rather than in the words of the original.) For this reason teachers may need to supplement certain parts of the text.

Not all of the material given in each section need be covered, and not all of the material covered should be given the same attention. Instead, an intensive study of one or more literary forms (e.g., the drama, the essay, the lyric, or the short story) should be undertaken by the individual student or the class as a whole.

As many Grade XII students study *Macbeth*, the Literature 21 and the English 30 courses should be articulated in the drama section.

COMMUNICATIONS 21A and 21B

Introduction

Communications 21A and 21B are offered in module form for three credits each. A maximum of six credits is available to a student taking modules in the Communications Elective.

The Communications modules subscribe to the major objectives as stated in the Secondary Language Arts Handbook. All modules focus on the basic skills of writing, reading, viewing, listening, speaking and acting as well as providing for student involvement, excitement and enjoyment. In the Communication modules, emphasis has been placed on the improvement in writing skills as an ongoing process.

Course Content

Choice can be made from fifteen modules. Credit value is shown after each module:

Business Communications (3 or 6 — Part A prerequisite to Part B)

Community Relations Network (3 or 6)

English As A Second Language (6)

Film (3 or 6 — Part A prerequisite to Part B)

How, What and Why of Writing (3 or 6 — Part A *not* prerequisite to Part B)

Journalism (3 or 6 — Part A prerequisite to Part B)

Language As A Manipulative Device (3 or 6 — Part A prerequisite to Part B)

Language Growth (3 or 6)

Plain Speaking (3)

Purposeful Speaking (3)

Radio (3)

Speeded Comprehension (3)

Television (3 or 6 — Part A prerequisite to Part B)

Thinking — The Core of Communication (3 or 6 — Part A prerequisite to Part B)

Writer's Workshop (3 or 6 — Part A *not* prerequisite to Part B)

Recommended Material

A number of references are suggested for each module, but no textbooks are prescribed. Refer to the Secondary Language Arts Handbook for a list of these materials.

LITERATURE 21A and 21B

Introduction

Literature 21A and 21B are offered in module form for three credits each. A maximum of six credits is available to a student taking modules in the Literature Elective. Any two Literature modules are taken for three credits or any four modules for six credits. However, student-teacher enthusiasm could lead to one module being developed to produce three credits.

The Literature modules subscribe to the major objectives as stated in the Secondary Language Arts Handbook. All the modules focus on the basic skills of writing, reading, viewing, listening, speaking and acting as well as providing for student involvement, excitement, and enjoyment. In the Literature modules emphasis has been placed on the improvement in writing skills as an ongoing process.

Course Content

Choice can be made from twenty modules:

Modules 1 to 6: Novels (Adventure and Mystery; American; British; Canadian; Recent Best Sellers; Twentieth Century).

Modules 7 and 8: Poetry (Canadian; Modern)

Modules 9 to 12: Drama (Drama in Three Media: Television Drama; Shakespearian Survey: The Plays; A Shakespearian Play in Depth)

Modules 13 to 20: Others (Africa's Contemporary Authors; Canadiana: Short Story and Humor; Children's Literature; Concepts of the Future; Native Canadian Literature; The Romantic Mind; Science Fiction — That Untravelled World; Tolkien, Fantasy and Folk-Tale).

Recommended Material

A number of references are suggested for each module, but no textbooks are prescribed. Refer to the Secondary Language Arts Handbook for a list of these materials.

GEOGRAPHY 20

Introduction

The Geography 20 course has been designed to enable the student to learn geography while enquiring as a geographer would. Consequently, emphasis is placed on the acquisition of skills and organizing concepts which will enable the student to understand and attack problems dealing with relations within and among places.

The course is based on a population theme and is divided into four major units which move from an intensive study of the local area, through the rest of Canada, to an examination of world patterns. Since the course is predicated on a discovery approach using the inquiry method, the content is presented through a series of cases which may either be studied directly through field observation or indirectly through sample study or other materials.

Primary References

- A. Boggs. *Maps: How to Read and Interpret Them*. Clarke, Irwin and Co., 1952.
- A. Gunn. *Patterns in World Geography*. W. J. Gage Ltd., 1968.
- N. Scarfe, et al. *A New Geography of Canada*. W. J. Gage Ltd., 1963.

Secondary References

Please consult the Senior High School Curriculum Guide for Geography 20.

Objectives

1. The student should acquire an understanding of the following major organizing concepts in geography: areal association, density, human occupancy, pattern, region, scale, spatial distribution, spatial interaction.
2. The student should acquire facility in the use of the geographer's mode of inquiry and skills such as the following:
 - (a) the reading and interpretation of aerial photographs, maps, pictures, tables and graphs, and other written source materials.
 - (b) fieldwork processes of observation and recording.
3. The student should have the opportunity to develop positive attitudes in relation to the following topics:
 - (a) respect for scientific method
 - (b) knowledge of multiple causation
 - (c) interdependence of peoples
 - (d) respect for similarities and differences of peoples
 - (e) clarification of values in respect to other value systems.

Course Content

Unit I — The Change in Settlement Patterns in the Local Area

- (a) Study of the neighbourhood
- (b) The relationship of the neighbourhood to the larger settlement area
- (c) The problem of place.

Unit II — Settlement Patterns in Western Canada

- (a) The human occupancy of Western Canada
- (b) The human occupancy of regions of Western Canada
- (c) Depth studies of regions.

Unit III — Settlement Patterns in Eastern Canada

- (a) The human occupancy of Eastern Canada
- (b) Depth studies of regions
- (c) Studies of larger regions in Eastern Canada.

Unit IV — World Patterns

- (a) The human occupancy of the world
- (b) Cities of the world
- (c) Agriculture of the world
- (d) Japan: case study of industrialization
- (e) World industry and resources
- (f) Landforms and land use
- (g) Climate and man.

NOTE: It is suggested that the first topic and at least three others be chosen for study in this unit.

HEALTH AND PERSONAL DEVELOPMENT 10

Primary References

1. Chittick. *Health For Canadians*. Macmillan Co. of Canada Ltd.
2. Geisel. *Personal Problems*.

Teachers' References

It is felt that a teacher offering the course at any or all grade levels should have access to the following references:

- (a) Sorenson and Malm. *Psychology For Living*. McGraw-Hill Co.
(If a copy of Averill's *Introductory Psychology* is available it will be useful as an alternative.)
- (b) Wheatley and Hallock. *Health Observation of School Children*.

Teachers will find one or more of the following references useful for background material in those sections of the course in Grades IX and X dealing with alcohol:

- (a) *Manual of Reference For Alcohol Education*.
Department of Education, Manitoba.
- (b) *Manual of Reference For Alcohol Education*.
Department of Education, British Columbia.
- (c) Hirsch. *Alcohol Education, A Guide Book For Teachers*.
- (d) McCarthy. *Teen-agers And Alcohol*.

Course Content

Unit 1—Success In High School

Orientation
Learning.

Unit 2—Our Physical Growth Into Adulthood

The Nature of the Body
Functions of the Body.

Unit 3—Canada's Progress in Public Health

Why Public Health Services?
Improvement of World Health
The General Health Picture in Canada
Canada's National Health Program
Growing Recognition of the Alcohol Problem.

Unit 4—Public Health In Alberta

Importance of Health Statistics
Public Health Measures in Alberta.

Unit 5—Personality

The Meaning of Personality
Character
Personality Under Stress.

Unit 6—Group Life

The Group's Responsibilities to the Individual
The Family Group
The Group and Leisure Time.

Unit 7—Man's Marvellous Control System

The Nervous System and Its Work
Disorder in the Nervous System.

Unit 8—Preventing Accidents and Meeting Emergencies

Protection in Public Transportation
Safety in Recreation
Safety in Industry
Alcohol and Safety.

Unit 9—Selecting a Vocation

The Importance of Career Planning
The Importance of Interests and Aptitudes in Choosing a Vocation
Personality and Its Relationship to Vocational Choice
Job Families and Job Opportunities
Making the Most of Opportunities to Secure Employment
Effective Procedures in Applying for a Job
Making Good on the Job.

HOME ECONOMICS

HOME ECONOMICS 10

Objectives

1. Provision of knowledge for the student without previous experience in home economics who is unlikely to have the opportunity to take further courses in home economics beyond this one year.
2. Development of interest in home economics and establishment of an understanding of good management in all areas.
3. Development of adequate basic skills to provide sufficient background for more advanced homemaking.

Unit 1—Management

- A.—Definition of Management
 - 1. Management in all areas
 - 2. Steps to good management.
- B.—Time management.
- C.—Energy management.
- D.—Money management.

Unit 2—Managing Family Meals

- A.—Management of meal work.
- B.—Guides to good eating.
- C.—Attractive meal service.
- D.—Better breakfasts.
- E.—Family luncheons.
- F.—Family dinners.
- G.—Entertaining.

Unit 3—Home Management

- A.—A well kept home.
- B.—The family wash.
- C.—Cleaning the home.
- D.—Electrical appliances.

Unit 4—Clothing Selection and Construction

Choice of Project: Suggested project is a shirtwaist dress made of firm fabric.

- A.—Good grooming.
- B.—Wardrobe planning and selection.
- C.—Textile study.
- D.—Construction of garment.

ELECTIVES—At least one to be studied.

1. **A Girl's Room**
 - A.—A well kept room.
 - B.—Privacy.
 - C.—Art principles applied to room furnishings.
 - D.—Arrangement for convenience and safety.
 - E.—Use of storage space.
 - F.—Room improvements.
 - G.—Window treatments.
 - H.—Making a room cheerful and attractive.

2. Girl's Social Calendar of Activities

- A.—Entertaining for special days.
- B.—Party themes.
- C.—Other possibilities for entertaining.
- D.—Three types of parties:
 1. Casual
 2. Informal
 3. Formal.
- E.—Party etiquette.

3. Home Related Arts and Crafts

Discuss principles of design and color and a number of crafts in preparation for planning and making one craft which expresses individuality.

4. Children's Clothing

- A.—Suitable clothing for children.
- B.—Pattern selection.
- C.—Choice of fabrics.
- D.—Construction of chosen garment.
- E.—Evaluation.

5. Remodelling Clothes

- A.—Satisfaction in remodelling.
- B.—Requirements of make-over garment.
- C.—Designing garment.
- D.—Construction of garment.

References

- Campion, Carson and Ramee. *Planning and Preparing Meals*. McGraw-Hill Company.
- Pollard, *Experiences in Homemaking*. Ginn and Company.
- Pollard. *Experiences in Clothing*. Ginn and Company.
- Raines, Margaret. *Managing Livingtime*. Prentice-Hall of Canada.

HOME ECONOMICS 21

"LOOKING AHEAD TO HOME LIVING"

Text

Craig, Hazel Thompson. *Thresholds To Adult Living*. Copp Clark Company.

Objective

This course is designed to prepare students for their future. Students are made to realize the responsibilities they will have in the future and how best to meet them.

Unit 1—Personal and Family Relations

- A.—Understanding and development of self.
- B.—Friendships.
- C.—Achieving maturity.
- D.—Accepting one's role as a community member.

Unit 2—Your Vocational Future

- A.—Planning ahead.
- B.—Getting and keeping a job.
- C.—Growing up socially.
- D.—Looking ahead to marriage.

Unit 3—Preparing and Serving Quicker Meals

- A.—Food fundamentals for two or ten.
 - 1. Choice of foods:
 - (a) Canada's Food Guide
 - (b) Nutrients
 - (c) Calories
 - (d) Food additives
 - (e) Shopping for food.
- B.—Planning meals for two.
 - 1. Simplifying work by using good management.
 - 2. Eating better for less.
- C.—Entertaining.
- D.—Aids to quick cooking.
- E.—Preparing the unusual.

Unit 4—Clothing Selection, Construction and Care

Project

Each student will be required to complete one garment—basic dress or basic outfit for girls and sports shirt or pyjamas for boys. The choice of fabric and finishing details will depend upon the previous experience of the students.

- A.—Clothing and social acceptance.
- B.—Better buymanship.
- C.—Clothing choice.
- D.—Textile study.
- E.—Garment construction.
- F.—Clothing care

Unit 5—Finding and Furnishing a Home

- A.—Choosing a home.
- B.—A good house plan.
- C.—Color in the home.
- D.—Furniture selection and arrangement.
- E.—Fixed background of a room.
- F.—Window treatment.
- G.—Accessories for the home.
- H.—Selection of tableware, linens, and appliances.
- I.—Care of the home.

Unit 6—The Baby and the Family

- A.—Looking forward to having children.
- B.—Prenatal care.
- C.—Care of the baby.
- D.—Development of baby.
- E.—Development of desirable habits.
- F.—Community responsibility for welfare of children.

References

- Craig and Rush. *Homes With Character*. Copp Clark Company.
- Department of National Welfare. *Canadian Mother and Child*. Department of Welfare, Ottawa.
- Landis, Judson and Mary. *Personal Adjustment — Marriage and Family Living*. Prentice Hall of Canada Limited.
- Pollard. *Experiences in Foods*. Ginn and Company.
- Wilson. *Sewing A Fine Seam*. Revised edition. McGraw-Hill Company of Canada.

FABRICS AND DRESS 10

Division of Time: Practical—4 periods; Theory—1 period.

Objectives

- 1. To develop good judgment in selection of style and fabric.
- 2. To realize selection and construction of garments expresses personality.
- 3. To realize care of one's clothing is a responsibility.
- 4. To learn to construct garments of varying difficulty.

Unit 1—Getting Ready to Sew

- A.—Use and care of sewing machine.
- B.—Selection and care of sewing equipment.
- C.—Introductory practice project.

Unit 2—Good Grooming

Qualities:

- A.—Poise.
- B.—Good taste.
- C.—Body care.
- D.—Good appearance.

Unit 3—Construction Techniques

Projects: (1) Classic slim skirt
(2) Simple classic blouse or shirt
(3) Summer dress.

Alternate projects: (1) sports wear
(2) sleep wear
(3) duster or housecoat.

N.B.—Limited to firmly woven cotton blend. Wool for skirt.
Minimum—three projects. Stress quality rather than quantity.

A.—Selection of pattern:

Suitable for: (1) figure
(2) age
(3) occasion.

B.—Selection of material:

Suitable for: (1) pattern
(2) occasion
(3) girl.

Consider performance and cost.

C.—Pattern—selection and special features.

D.—Personal measurements:

(1) correct size
(2) correct figure type.

E.—Preparation of material:

(1) stress grain perfection
(2) truing the material by:
(a) tearing
(b) pulling a thread and cutting.

F.—Placing fabric:

(1) layout
(2) cutting
(3) marking.

G.—Assembly and fitting:

—stress unit method.

H.—Construction processes:

(1) seams and seam finishes
(2) pressing
(3) buttonholes
(4) plackets and zippers
(5) sleeves
(6) collars and cuffs
(7) finishing techniques, hooks, and snaps, etc., carefully executed.

Unit 4—Fibers and Fabrics

A.—Weaves—plain, twill, satin, sateen, pile, leno.

B.—Dyeing—yarn, piece, printing.

C.—Finishes—mechanical, chemical.

—Students should be familiar with common types of cotton fabrics and simple weaves.

—COTTON—used in dress: sources; characteristics; identification; uses; and care.

—WOOL—used in skirt; sources; uses; and care.

—SYNTHETICS—introduce briefly—arnel; terylene; nylon; orlon.

Unit 5—Shopping

Consider:

- A.—Core (basic) wardrobe.
- B.—Addition of coordinates to the core wardrobe.
- C.—What to look for when we buy.
- D.—Information given by a good label.
- E.—What a consumer should know about a garment.

References

- Erwin. *Clothing For Moderns*. Brett Macmillan Company.
- Carson. *How You Look and Dress*. McGraw-Hill Company.
- Potter and Corbman. *Fiber to Fabric*. McGraw-Hill Company.
- Wilson. *Sew A Fine Seam, Revised*. McGraw-Hill Company.

FABRICS AND DRESS 20

Division of Time: Practical—4 periods; Theory—1 period.

Objectives

1. Stress the principles of good management.
2. Make pupils aware of the many decisions to be made wisely in buying fabrics and ready-mades.
3. Encourage pupils to appreciate good design which includes function and beauty.

Unit 1—Core Wardrobe

- A.—Definition.
- B.—Clothing inventory.

Unit 2—Projects

- A.—A fully lined WOOL basic dress.
- B.—A slim basic wool skirt (a) drafted
(b) remodelled.
- C.—A dress or blouse of silk or a silk-like material.

Unit 3—Fibers and Fabrics

- A.—Fibers (1) basic
(2) staple.
- B.—Weaves (1) basic
(2) woven in
(3) embroidered.
- C.—Knitting — felting — braiding.
- D.—Finishes.
- E.—Study — Wool and hair fibers
 - Silk source — countries
 - uses — manufacture — care —
 - performance
- F.—Types of Man-Made Fibers — according to generic names:
 - (1) Cellulosics — rayon
 - acetate
 - triacetate.

Unit 4—Economics of Clothing

- A.—Study labels and hang-tags.
- B.—Comparison — ready-mades; hand-mades; custom-mades.
- C.—Types of buyer.
- D.—Budgets.

References

Chambers and Moulton. *Clothing Selection*. Longmans Canada Limited.
Potter and Corbman. *Fiber To Fabric*. McGraw-Hill Company.
Sturm and Grieser. *Guide To Modern Clothing*. McGraw-Hill Company.
Wingate. *Know Your Merchandise*. McGraw-Hill Company.

FABRICS AND DRESS 30

Division of Time: Practical—4 periods; Theory—1 period.

Objectives

1. An execution of custom dressmaking techniques.
2. Understand general standards of good fit.
3. Become a more capable consumer.
4. Develop a more pleasing personality.

Unit 1—Advanced Clothing Construction

Project I — A tailored suit or coat; or a wool skirt and jacket.

- (1) principles of good tailoring
- (2) delicate stitching
- (3) correct finishing details.

Project II — Special occasion dress — a graduation dress, a bridesmaid dress, or a formal;

- (1) challenged by a luxury fabric
- (2) couturier technique
- (3) fine hand-stitching
- (4) delicate finishing details.

Unit 2—Textile Research

- a brief view of weaves and finishes.
- Continued study of the man-made fibers being used today, stressing their performance and care. Read and study available textile books, updated pamphlets; take field trips, etc.

Unit 3—Consumer Education

Consider:

- A.—Careful planning.
- B.—Thoughtful buying.
- C.—Proper care of clothes.
- D.—Personal influences.
- E.—Personal finances.
- F.—Inventory and hang-tag file.
- G.—Buying points.
- H.—Shopping plans.
- I.—How to buy ready-mades.

References

- Chambers and Moulton. *Clothing Selection*. Longmans Canada Limited.
- Sturm and Grieser. *Guide To Modern Clothing*. McGraw-Hill Company.
- Wilson. *Sew a Fine Seam*. Revised. McGraw-Hill Company.
- Wingate. *Know Your Merchandise*. McGraw-Hill Company.

FOODS AND NUTRITION 10

Texts

Pollard, L. Belle. *Experiences With Foods*. Canadian Edition. Ginn and Company.

or

Campion, Carson and Ramee. *Planning and Preparing Meals*. Canadian edition. McGraw-Hill Company.

McDermott, Trilling and Nicholas. *Food for Modern Living*. McClelland and Stewart.

Division of Time: Practical—4 periods; Theory—1 period.

Objectives

The development of the ability to select and prepare an adequate family diet with due attention to nutrition, standard methods, cost, time available, correct service, and necessary home management for smooth running of the kitchen, dining room and laundry.

Scope

A.—Nutrition.

Sequence

1. Canada's Food Guide.
2. Source and function of food nutrients.
3. Criticism of popular meals from nutritional standpoint.
4. Correction of faulty nutrition applied to individual students.

B.—Meal Planning.

1. Planning and analysis of balanced meals.
2. Intelligent spending of the food dollar — consumer buying.
3. How to be an intelligent buyer by: reading labels, knowing grades, studying advertising.

C.—Table Setting and Etiquette.

1. Choose table appointments — to harmonize with the room and furniture.

Scope	Sequence
	<ol style="list-style-type: none"> 2. Study table appointments — linen, cutlery and silver, china, glass and crystal, table centres. 3. Table setting, service and etiquette. 4. Develop poise and ease through actual practice and practical application.
D.—Laundry.	<ol style="list-style-type: none"> 1. Launder towels, aprons and table linen used in the cookery laboratory. 2. Learn about soaps, synthetic detergents, hardness of water, water softeners, blueing, etc. 3. Remove simple stains found on school linen.
E.—Planning and Preparing Snacks and Simple Teas.	<ol style="list-style-type: none"> 1. How to be a good manager, plan menus, use tested recipes, make market lists, and time schedules. 2. How to work efficiently — correct use of equipment and measurements. 3. How to be an efficient housekeeper — kitchen arrangement, dishwashing, care of equipment, sanitation in kitchen, safety. 4. Grooming, personal cleanliness. Suitable dress for all occasions. 5. Learn to make sandwiches, dips, garnishes, beverages, simple cookies.
F.—Planning, Preparing and Serving Breakfasts.	<ol style="list-style-type: none"> 1. Planning simple family breakfast. 2. Food theory developed for each topic: <ol style="list-style-type: none"> a) Value in diet b) Classification and characteristics c) Standard methods of preparation d) Source of product e) Where to use f) How to serve g) Comparison with perfect product for evaluation. 3. Foods in breakfast pattern: <ol style="list-style-type: none"> a) Fruits (fresh, cooked, frozen, and dried) b) Cereals — new ways of serving c) Quick breads — muffins, griddlecakes, waffles, tea biscuits. Syrup for griddle cakes d) Eggs — poached, scrambled, baked, shirred, omelettes, etc. e) Bacon, ham, sausage f) Beverages — milk, coffee, cocoa.
G.—Foods in the Luncheon Pattern.	<ol style="list-style-type: none"> 1. Plan and serve simple family luncheons. 2. Follow outline suggested in F.(2).

Scope	Sequence
	3. Foods in the luncheon pattern: a) Cream soups, chowders, white sauce b) Cheese c) Casseroles d) Meats — inexpensive meats — stews — pot roasted — braised — pressure cooked e) Vegetables — boil, bake, saute, scallop and pressure cook a variety of vegetables f) Salads and salad dressings g) Desserts — 1) fruit, milk, custards, simple gelatin 2) dessert sauces 3) butter cakes and icings 4) pastry — double crust pies, single crust pies, tarts.
H.— Foods for Special Occasions.	1. Candy — fudge. 2. Cookies — bar, drop, refrigerator, rolled, moulded, etc. 3. Fruit loaves.
I.— Vocational Possibilities in Food Service.	1. Consider the vocational training offered which will help in finding employment in the food services at: a) Composite high school b) Vocational high school c) Home economics department in a university d) Provincial school of technology.

FOODS AND NUTRITION 20

Texts

Pollard, L. Belle. *Experiences With Foods*. Canadian edition. Ginn and Company.

or

Campion, Carson, and Ramee. *Planning and Preparing Meals*. Canadian edition. McGraw-Hill Company.

Objectives

1. To develop a desire to assume greater responsibility for the planning and serving of attractive meals in the home in varying circumstances and to plan and prepare nutritious dinners.
2. To develop skill in cookery.
3. To develop the ability to entertain simply yet graciously. Practical work accompanied by theory and evaluation.

Scope	Sequence
A.—Nutrition.	<ol style="list-style-type: none"> 1. Review food theory. Study deficiency diseases due to the lack of an essential nutrient. 2. Consider the individual food needs of children under- and over-weight and convalescent. 3. Digestion and absorption.
B.—Meal Management.	<ol style="list-style-type: none"> 1. Review meal patterns for breakfast, luncheon and dinner; table setting and etiquette. 2. Meal management includes, time and money management, housekeeping, market orders, time schedules, evaluation.
C.—Money Management in Meal Planning.	<ol style="list-style-type: none"> 1. The food dollar. 2. Budgets and accounts.
D.—Kitchen Management.	<ol style="list-style-type: none"> 1. Floor plan of well arranged kitchen. 2. Principles of arrangement of supplies and equipment. 3. Selection of kitchen equipment. (Large and small.) 4. Care of equipment.
E.—Laundry.	<ol style="list-style-type: none"> 1. Review Foods and Nutrition 10 — school laundry.
F.—Preservation of Food.	<ol style="list-style-type: none"> 1. Causes and ways to prevent food spoilage. 2. Preservation of foods — all types including freezing.
G.—Cookery Based on Dinner Preparation — advanced cookery — include what has not been covered in Foods and Nutrition 10.	<ol style="list-style-type: none"> 1. Appetizers — stock soup, canapes, cocktails. 2. Yeast breads and rolls. 3. Salads — mayonnaise and French dressing. 4. Proteins — more expensive cuts of beef, pork, liver, chicken, fish. 5. Vegetables — new varieties with sauces. 6. Deep fat frying. 7. Cakes — all types. 8. Pastry — new types. 9. Desserts — gelatin, ice cream, sherbets, simple and elaborate desserts. 10. Special occasion food — Christmas and Easter cookery — candy.
H.—Vocational Opportunities in the Food Services.	<ol style="list-style-type: none"> 1. Review outline in Foods and Nutrition 10. 2. Specialized fields, catering, food technician, dietitian, etc.

FOODS AND NUTRITION 30

Text

Helen Wattie and Eleanor Donaldson. *The Nellie Pattinson's Canadian Cook Book*. Ryerson Press, 1961.

Objective

To give a thorough working foundation as a basis for homemaking or for a career.

Scope

A.—Preservation of Food.

B.—Planning and Serving Meals.

C.—Nutrition.

D.—Large Quantity Cookery.

E.—Management of Resources.

F.—The Kitchen.

G.—Demonstrations.

H.—Regional or National Dishes.

I.—Cookery Projects and Research

- discuss value and purpose
- choose areas of study
- group or individual study
- evaluate results.

J.—Vocational Opportunities

Sequence

1. Review theory—choose to do two new problems.
1. Review informal service. Serve one formal meal.
2. Suggested meals—low cost, quick meals, freezer meals, outdoor meals, oven meals, the career girl entertains.
1. Review nutritional requirements for a normal diet.
2. Study nutritional requirements in abnormal conditions which require special diets.
3. The invalid tray.
1. Study with reference to school and community functions.
2. Practical application — school party refreshments, cafeteria, graduation.
3. Take field trips to hospitals, etc.
1. Your role as a consumer.
2. Planned spending — budgets and accounts.
3. Credit buying.
1. Planning a kitchen, cabinets, finishes, floors, etc.
2. Choosing and buying large equipment.
1. Teacher demonstrates to establish principles.
2. Students do at least one demonstration.
1. Demonstration and practical cookery.
2. Use of seasonings — herbs, spices.
1. Suggested projects:
 - a) Appetizers
 - b) Vegetables
 - c) Meat
 - d) Casseroles
 - e) Salads
 - f) Quick breads
 - g) Pastry
 - h) Yeast breads
 - i) Cakes
 - j) Cookies
 - k) Fancy desserts
 - l) Mixes.
1. Do a thorough study of vocational opportunities.
2. Analyzing jobs — applying for a job.

HOME ECONOMICS (NEW) CLOTHING AND TEXTILES

CLOTHING AND TEXTILES 10

Objectives

1. To develop good judgement in selection, style and fabric.
2. To realize that selection and construction of garments express personality.
3. To realize that care of one's clothing is a responsibility.
4. To learn to construct garments of varying difficulty using a variety of textiles.

Text

Horn, Marilyn J. *Second Skin*. Thomas Nelson & Sons.

Concept A	—Significance of Clothing and Textiles to Individuals in Society	
Subconcepts	—Interrelationship of clothing and culture	—Social and psychological aspects of clothing
Topic Emphasis	—"The Silent Message of Clothes"	—Basic need for gratification
	—"Function of Clothing"	—Self-concept —Clothing values
Subconcepts	—Clothing as a medium for artistic perception, expression and experience	—Physiological aspect of clothing
Concept B	—Nature of Clothing and Textiles	
Subconcepts	—Textiles	—Garments
Topic Emphasis	—Natural fibers	—To construct three or more well made garments involving new learnings of increased difficulty of a variety of fabrics
	—Man-made and synthetic fibers	—Pattern alterations
	—Finishes	—Draft or adapt a pattern for a portion of a garment
	—Differences in yarns	
	—Construction of the woven fabrics affect performance	
Concept C	—Acquisition and Use of Clothing and Textiles	
Subconcepts	—Consumer selection	
	—Consumer use and care	
	—Consumer responsibility	

CLOTHING AND TEXTILES 20

Objectives

1. To develop and use principles of good management.
2. To be aware of the many decisions to be made wisely in buying fabrics and ready to wear garments.
3. To be aware of the interrelationship of clothing and culture.
4. To encourage pupils in the appreciation of good design which includes function and beauty.

Texts

Craig, Hazel. *Clothing: A Comprehensive Guide*. McClelland & Stewart Ltd.

Ramsay, Vera. *Create Something Beautiful*. Box 1046, Station A, Vancouver, B.C.

Concept A	—Significance of Clothing & Textiles to Individuals in Society	
Subconcepts	<ul style="list-style-type: none"> —Interrelationship of clothing and culture —The social and psychological aspects of clothing —Medium for perception, artistic expression and experience —Economics —Physiological aspects 	
Concept B	—Nature of Clothing and Textiles	
Subconcepts	<ul style="list-style-type: none"> —Textiles —Synthetics —Characteristics of yarns and variations on texture, design and use —Specialty fibers for beauty —Complex weaves for variety —Construction methods other than weaving which give variety 	
Topic Emphasis	<ul style="list-style-type: none"> —Garments —To analyze elements of good fit —To do pattern alterations —To use drafting to develop or to adapt creative and original ideas —To make three garments or more 	
Concept C	—Acquisition and Use of Clothing and Textiles	
Subconcepts	<ul style="list-style-type: none"> —Consumer selection —Consumer responsibility 	
Topic Emphasis	<ul style="list-style-type: none"> —To plan a workable budget within the family income and plan systematic guidelines to meet needs —To recognize the responsibilities and obligations of consumers 	

CLOTHING AND TEXTILES 30

Objectives

1. An execution of custom dressmaking techniques.
2. To understand general standards of good fit.
3. To recognize the interrelationship of clothing and culture and the influence on fashion.
4. To analyze how clothing reflects the personality and values held by the wearer.
5. To recognize the knowledge needed by and responsibilities of an informed consumer.

Texts

Bane, Allyne. *Tailoring*. McGraw-Hill.
 Broby-Johansen. *Body and Clothes*. Van Norstrand Reinhold Ltd.
 or
 Anspach, Karlyne. *The Why of Fashion*. Iowa State Press, Press Building, Ames, Iowa.

Concept A	—Significance of Clothing and Textiles to Individuals in Society	
Subconcepts	<ul style="list-style-type: none"> —Interrelationship of clothing and culture —Social and psychological aspects of clothing —Medium for perception, artistic expression and experience —Economics —Physiological 	

Concept B	—Nature of Clothing and Textiles
Subconcepts	—Textiles
Topic Emphasis	—“Generic Genius” —To compare physical and chemical characteristics of textiles and clothing for performance and increased satisfaction from selection, use and care
	—Garments —To observe and appreciate methods used by successful designers —Draft or adapt a pattern creatively —Tailor a garment —Construct two other projects commensurate with ability —Accessorize projects
Concept C	—Acquisition and Use of Clothing and Textiles
Subconcepts	—Consumer selection —Consumer responsibility
Topic Emphasis	—Factors involved in planning clothing budgets —Credit —types —availability —cost —advantages, disadvantages and abuse of credit buying —ability to calculate the cost of credit

FOOD SCIENCE

The students, with the guidance of the teacher, should develop generalizations for each section.

FOOD SCIENCE 10

Objectives

1. The development of the ability to select and prepare an adequate family diet with due attention to nutrition, standard methods, cost, time available, correct service, and necessary home management for smooth operation.
2. To recognize the effect of genetic and agriculture practices on food and to identify some of the physical and technological developments which are commonly used to alter the nature of food.

Text

Shank and Fitch. *Guide to Modern Meals*. McGraw-Hill.

Concept A	—Significance of Food
Subconcepts	—As related to cultural and socio-economic influences —As related to nutrition —As related to physiological and psychological satisfactions
Topic Emphasis	—Contributing factors effecting choice —Evaluate food as a socializer —Factors which underlie varying nutrient needs —Planning, preparing and serving menus and evaluating the project
Concept B	—Nature of Food
Subconcepts	—Chemical and physical properties of food —Factors effecting change in properties of food

Topic Emphasis	<ul style="list-style-type: none"> —Effect of agriculture and technological developments on food —Review basic food preparation techniques —Select foods from the following categories and study effect of physical processes <ul style="list-style-type: none"> —protein —starch —sugar —fat —fruits —vegetables —Compare convenience foods
Concept C Subconcepts	<ul style="list-style-type: none"> —Provision of Food —Production —Consumer practices —Protection measures —Management of resources
Topic Emphasis	<ul style="list-style-type: none"> —Compare and contrast some of food industry's influence on food production and consumption —Extend ability to shop comparatively —Apply safety and sanitary measures in working with food

FOOD SCIENCE 20

Objectives

1. To develop a desire to assume greater responsibility for the planning and serving of attractive meals and for social events.
2. To develop skill in cookery.
3. To increase knowledge and understanding by comparing nutrient content of regional and international diets.
4. To assess the nutrient needs of the body and to incorporate them in adequate meal patterns.
5. To recognize factors affecting the physical structure and availability of food.
6. To diagnose consumers' purchasing habits and the manner in which they affect the quality and price of food.

Text

McDermott, Trilling, Nicholas and Meiklejohn. *Food for Modern Living*. Canadian Edition. McClelland & Stewart Ltd.

Concept A Subconcepts	<ul style="list-style-type: none"> —Significance of Food —As related to cultural and socio-economic influences —As related to nutrition —As related to physiological and psychological satisfaction
Topic Emphasis	<ul style="list-style-type: none"> —Interrelation of current food habits with change in supply and production —Comparison of nutrient content of various regional and international diets —Assessment of nutrient needs of the body and their incorporation into adequate meal patterns —How food habits are formed and changed
Concept B Subconcepts	<ul style="list-style-type: none"> —Nature of Food —Chemical and physical properties of food —Factors effecting changes in properties of food

Topic Emphasis	<ul style="list-style-type: none"> —Texture of foods —Use of a variety of leavening agents in practical work —Use of emulsions, e.g., mayonnaise —Spoilage and foods that are most susceptible —Micro-organisms and enzymes in food —Prepare foods using various food preparation techniques
Concept C Subconcepts	<ul style="list-style-type: none"> —Provision of Food —Production —Consumer practices —Protective measures —Management of resources
Topic Emphasis	<ul style="list-style-type: none"> —Social and technological changes that affect the supply of food to the consumer —New trends in processing

FOOD SCIENCE 30

Objectives

1. To give a thorough working foundation as a basis for homemaking or for a career.
2. To become aware of the world problems related to food supply.
3. To be aware that nutrition encompasses intake, digestion, absorption and utilization of nutrients and the relationship to physical and mental well-being.
4. To analyze ways in which the consumer can bring about changes in the quality and supply of foods.

Text

Cote, Patricia. *People, Food and Science*. Ginn and Co.

Concept A Subconcepts	<ul style="list-style-type: none"> —Significance of Food —As related to cultural and socio-economic influences —As related to nutrition —As related to physiological and psychological satisfaction
Topic Emphasis	<ul style="list-style-type: none"> —World problems related to food —Relation of politics to problem of food supply and distribution —Intake, digestion, absorption and utilization of nutrients —Interrelationship of good nutrition with physical and mental well-being
Concept B Subconcepts	<ul style="list-style-type: none"> —Nature of Food —Chemical and physical properties of food —Factors effecting change in properties of food —Interrelationship of the enrichment process and the nature of food and laws governing this —Chemical and physical properties of food and how changes can be made —Preparation of fruits and vegetables, starches, flours and flour mixtures, sugars, eggs, milk, meat, fish, poultry and fats
Concept C Subconcepts	<ul style="list-style-type: none"> —Provision of Food —Production —Consumer practices —Protective measures —Management of resources
Topic Emphasis	<ul style="list-style-type: none"> —Increases in variety of foods as a result of growth of technology and sociological trends —Consumer practices and their effect on supply, quality and variety of foods —Preparation of well planned and well served meals

MODERN LIVING

MODERN LIVING 10

Objectives

1. To help students in becoming aware of self-growth which occurs gradually and continually in an ever widening environment.
2. To recognize the values and need for time, energy and money management.
3. To develop an awareness of specific needs that are satisfied by housing.

Text

Bratton, Esther. *Home Management Is.* Ginn & Co.

Housing

Concept	— Influence of Housing on People
Subconcepts	—Physical and psychological —Social
Topic Emphasis	—Characteristics of environment which affect the well-being of individuals —temperature, humidity, noise, odours, fumes, orderliness, aesthetic qualities —Interrelationship of family and the neighbourhood —Responsibilities for owners and tenants
Concept	— Processes in Providing Housing
Subconcepts	—Human —Environmental
Topic Emphasis	—Housing standards —Individual and family requirements —Reflection of neighbourhood and community on cultural values —Effect of zoning ordinances and building restrictions on the community —Design elements affecting arrangement of furniture
Concept	— Process in Providing Housing
Subconcept	—Designing
Topic Emphasis	—Review elements and principles of design —Stress importance of good structural and decorative design —Harmony in combining lines, colour, texture, space and form

Management

Concept	— Managerial Processes	
Subconcept	—Decision making	—Organization of activities
Topic Emphasis	—Steps in decision making —Family decision	—How to develop policies —Homemaking, housekeeping and management —Decision making —Planning, controlling, evaluating
Concept	— Effective Elements in Management	
Subconcepts	—Resources and their utilization as related to the family life cycle	—Values, goals, standards

Topic Emphasis	<ul style="list-style-type: none"> —Meaning of "life cycle" —Evaluate use of resources throughout life cycle —Need for planning use with changing demands of life cycle 	<ul style="list-style-type: none"> —Meaning of each and relation to each other —Define conventional and flexible standards —Recognition of similar family values but different goals
----------------	--	---

Human Development and the Family

Concept	—Universality of Individuals
Subconcept	—Transmission of culture
Topic Emphasis	<ul style="list-style-type: none"> —Identify cultural patterns in North America today transmitted from past generations —to analyze why some patterns persist —to be aware of contribution of all generations to current cultural pattern
Concept	—Development and Socialization of the Individual
Subconcept	<ul style="list-style-type: none"> —Maturity and marriage preparation
Topic Emphasis	<ul style="list-style-type: none"> —The multi-faceted properties of maturity —Definition of chronological, physical, moral, emotional, social, vocational and intellectual maturity —Contrast characteristics of mature and immature person —Consider various stages of maturity <ul style="list-style-type: none"> —young child —adolescent —adult —Process of development of self-concept of a mature person —To recognize some factors which contribute to a lasting marriage —Need for qualities of warmth, acceptance, flexibility in preparation for marriage

MODERN LIVING 20**Objectives**

1. To help students become aware of values and interpersonal relationships in the development of the individual.
2. To help develop an understanding of the family life cycle.
3. To recognize that management of time, effort and money contributes to well-being.
4. To assist students in the realization that rational decisions in the selection of a home and furnishings are dependent on being informed.

Text

Landis, Paul H. *Your Marriage and Family Living*. McGraw-Hill.

Housing

Concept	—Processes in Providing Housing
Subconcepts	<ul style="list-style-type: none"> —Designing —Selecting —Furnishing and equipping —Managing —Maintaining
Topic Emphasis	<ul style="list-style-type: none"> —Function — an architectural theory — an integration of purpose and form with beauty as an integral part —Creating an interior that meets physical and aesthetic needs —Storage selection related to use and care

Management

Concept	— Effective Elements in Management
Subconcept	—Resources and their utilization as related to time, energy, money
Topic Emphasis	<ul style="list-style-type: none"> —Time <ul style="list-style-type: none"> —time related to age and culture —time related to the individual —management of time —Energy <ul style="list-style-type: none"> —management of energy —energy has physical and psychological content —forms of fatigue —Money <ul style="list-style-type: none"> —meaning to the individual —types of credit costs —saving plans — bank, insurance

Human Development and the Family

Concept	— Universality of Individuals
Subconcept	<ul style="list-style-type: none"> —Family functions <ul style="list-style-type: none"> —child bearing —child rearing —regulation of behaviour —economic support
Topic Emphasis	<ul style="list-style-type: none"> —Economic, social, emotional and interactional influences of children in a family <ul style="list-style-type: none"> —current attitudes —preparation for parenthood —legal responsibilities —care of children
Concept	— Development and Socialization of the Individual
Subconcepts	<ul style="list-style-type: none"> —Issues in development and socialization of the individual <ul style="list-style-type: none"> —current role changes for men and women —the population crisis
Topic Emphasis	<ul style="list-style-type: none"> —The meaning of a role and how people learn a particular role —Variety of definitions for masculinity and femininity —Changes in relationship in current society —Function of family throughout history —Discuss population dynamics and socio-economic reasons for controlling family size
Concept	— Challenge and Creative Possibilities of Change
Subconcept	<ul style="list-style-type: none"> —The changing family
Topic Emphasis	<ul style="list-style-type: none"> —Elements contributing to changed functions of the family —Resistance of human beings to change —Processes of cultural change —Contrast rapid social change with slower change —Strains on families caused by rapid social change —Various methods for coping with change

MODERN LIVING 30**Objectives**

1. To help students prepare for their future.
2. To help students understand the significance of good judgement and the power of critical and creative thought as applied to establishing a home and making it comfortable and adapting it to family requirements.
3. To explore the contemporary dual roles of homemaker-provider for both men and women.
4. To help students promote in a positive way the welfare and security of the individual through the home and a successful family life.

Text

Craig, Hazel. *Homes With Character*. D. C. Heath.

Housing

Concept	—Factors Influencing the Form and Use of Housing
Subconcepts	<ul style="list-style-type: none"> —Human —Environmental
Topic Emphasis	<ul style="list-style-type: none"> —Factors which influence choice —Needs of disabled people —Safety devices for children, the elderly, the handicapped, etc. —Values —Environmental factors that influence the form and use of housing
Concept	—Processes in Providing Housing
Subconcepts	<ul style="list-style-type: none"> —Designing <ul style="list-style-type: none"> —life cycle —landscaping —lighting —Selecting —Building —Financing —Furnishing —Managing —Maintaining
Topic Emphasis	<ul style="list-style-type: none"> —Changing of needs with <ul style="list-style-type: none"> —changes in life cycle —effect of appearance on house value —types of housing on the market —advantages and disadvantages in owning vs renting —sources of technical and legal information and advice —arrangement of furniture for care, safety, use —contrast heating methods as to cost and practicality —new methods and materials which affect construction, cost, care —housing as related to family finance —analyze variations in kind and cost of credit —how family members can contribute to improving the home and thus extend family income

Management

Concept	—Environmental Influences
Subconcept	—Societal
Topic Emphasis	<ul style="list-style-type: none"> —How changes affect use of resources —rural to urban —integration of cultures —pressure of standards of living —mass media advertising <ul style="list-style-type: none"> —Roles of people in relation to expectation and pressure, e.g., daughter or son, sister or brother, teenager, employer, friend, confidant, consumer

Human Development and the Family

Concept	—Universality of Individuals
Subconcept	—Patterns of individual human development
Topic Emphasis	<ul style="list-style-type: none"> —Universal features of human development —Effect of environment —Processes involved in human development —Stages of pre-natal development and processes of birth —Life cycle
Concept	—Development and Socialization of the Individual
Subconcept	—Human adaptability
Topic Emphasis	<ul style="list-style-type: none"> —Reciprocal interaction between human development and the environment —Factors conducive to emotional maturity in a child —Versatility of human beings to adapt to physical, mental and social handicaps or problems —Creativity and adaptability in meeting everyday relations —Recognition that all people are capable of creative response

INDUSTRIAL ARTS

SAFETY NOTE

Every industrial arts laboratory must have an effective safety program. The teacher must be vigilant to provide adequate and continuous supervision so that safe practices are followed in all laboratory activities.

General Objectives

1. To provide exploratory experiences in various technologies prevalent in a productive society.
2. To provide a synthesizing environment for students to apply their academic knowledge in the solution of practical problems.
3. To provide a supplementary guidance function by introducing the students to the multiplicity and interrelationship of educational and occupational opportunities.
4. To provide an environment which stimulates the individuals to discover and develop their interests and talents.
5. To develop attitudes of safety with a respect for safe working habits and practices in the use of tools, equipment and materials.
6. To develop attitudes of personal and social responsibility.
7. To have students develop an organized conceptual frame of reference interrelating the knowledge of the various technologies prevalent in a productive society.
8. To develop an understanding of man's changing role in our industrialized society.

PROGRAM I **GENERAL TECHNOLOGY 10, 20, 30**

The General Technology program consists of a series of three courses: General Technology 10 (4-5 credits), General Technology 20 (4-5 credits) and General Technology 30 (5 credits). Each course requires the completion of two to four units of study selected from the units listed. Over the three courses A STUDENT may elect to develop a major unit of study by exploring it for up to half time. The other units should be selected from at least three of the five different clusters: Materials, Electronics, Power, Graphics and Special Units.

Following are the clusters and the units in each

- Basic Electricity
- Basic Electronics
- Basic Computer
- Woods
- Metals
- Earths
- Plastics
- Textiles
- Drafting
- Photography
- Printing
- Power Sources
- Fluid Transmission
- Mechanical Transmission
- Research
- Production Science
- Hot Metals
- Building Construction
- Food Science

PROGRAM II

INDUSTRIAL ARTS CLUSTER 10, 20, 30 PROGRAM

Introduction

The materials cluster introduces students to a number of processes used to shape and form materials to man's uses. The study includes an introduction to the equipment and machines used in the materials industry so that principles of operation and safe control are understood. Materials testing is integrated in this study so that students understand the need for careful selection of materials for a particular use.

Specific Objectives

1. To provide an opportunity for students to gain basic concepts on how materials are shaped, formed and fastened.
2. To give students an opportunity to learn to use and handle equipment correctly and safely.
3. To introduce students to the many occupational areas related to materials and their fabrication.

The course consists of four units each year in wood, metals, plastics and one craft material chosen from ceramics, leather, lapidary, textiles. Each unit is developed under the following headings:

- 1) Layout and Design
- 2) Sources and Applications
- 3) Hand Processes
- 4) Machine Processes
- 5) Fasteners
- 6) Finishing
- 7) Occupational Information.

A. Electronics	— Basic Electricity
	— Basic Electronics
	— Electronic Systems
	— Computer
B. Materials	— Woods
	— Metals
	— Plastics
	— Earths
	— Textiles
C. Graphic Communications	— Drafting
	— Photography
	— Printing
D. Power Mechanics	— Power Sources
	— Fluid Transmission
	— Mechanical Transmission

MATERIALS 10

I. Wood

- Layout
- Identification and use, testing
- Hand tools and processes — planing, chiseling, boring, sawing
- Machine processes — surfacing, turning, sawing
- Fastening — nails, screws, glue
- Finishing — sealer, filler, oil, varnish, wax
- Occupational information

II. Metal

- Layout in metal — tape, ink
- Identification and source — manufacture of steel, testing
- Hand processes — shaping, sawing, filing, drilling
- Machine processes — grinding, drilling
- Fastening — rivetting, soldering, screws and bolts
- Finishing — paint
- Occupational information

III. Plastics

- Design in acrylics, butyrates, vinyls
- Cutting, filing, machining processes
- Heat forming
- Fastening with cements, solvents, mechanical means
- Finishing processes — coloring, buffing, polishing
- Industrial uses and occupational opportunities

IV. Craft Materials

Only one of the following crafts may be selected each year of the program:

(1) Leather

- Selection, uses and design
- Leather industries of Alberta
- Processes — cutting, carving, creasing, lacing
- Fasteners — sewing, rivetting, glues, snaps

(2) Ceramics

- Source and testing of materials
- Industrial applications
- Shaping and forming ceramics products — slab, coil, wheel, slip, molding
- Firing
- Finishing — glazes
- Occupational information

(3) Lapidary

- Identification and sources of materials
- Processes of cutting, grinding, lapping, tumbling, faceting, polishing
- Use of fasteners

(4) Art Metal

- Design principles
- Materials
- Processes — cutting, filing, soldering, drilling, annealing, pickling, forming, twisting, beating, spinning
- Finishing — planishing, fleeting, chasing, stamping, stippling, embossing

MATERIALS 20

I. Wood

- Blueprint reading, planning procedure and bills of materials
- Imported woods — use and characteristics
- Tool processes — dados, grooves, chamfers, rabbets, turning, routing
- Bending, laminating, veneering and testing wood materials
- Fastening — joints, glues and adhesives
- Finishing — lacquers, varnish, Swedish oil, polishing
- Wood industries and occupational opportunities

- II. Metal
 - Metal symbols
 - Metallurgy — hardening, heat treatment, annealing, tempering
 - Machine processes — turning, shaping
 - Finishing with — spray, industrial methods
 - Occupational opportunities
- III. Plastics
 - Design and symbols
 - Processes — heat forming, laminating, blow forming, vacuum forming
 - Tests and experiments in strengths and shaping of plastics
- IV. One craft other than that chosen in Materials 10

MATERIALS 30

- I. Wood
 - Reading architectural drawings
 - Organizing of companies (construction)
 - Selection of building sites
 - Material selection and testing
 - Construction planning
 - Basic design of frame building
 - Construction processes — concrete form design, framing, walls and rafters, roofing, finish carpentry
 - Tool processes — sawing, nailing, conditioning tools
 - Occupational information
- II. Metal
 - Design for mass production
 - Material testing — brittleness, ductility, toughness, malleability, shear torsion
 - Processes — case hardening, work hardening
 - Production processes — copper, bauxite, alloys, aluminum
 - Machine processes — turning, knurling, filing, polishing, tapering, milling a flat surface
- III. Plastics
 - Resins, fiberglass
 - Material processes — embedding, overlay, laminating, molding, fiberglass repair
 - Machine processes — carving, rotational molding, slush mold, injection, extrusion, compression molding, transfer molding
 - Finishing methods
 - Industrial application
- IV. Craft other than taken in 10 or 20

INDUSTRIAL ARTS ELECTRONICS 10, 20, 30

Introduction

The approach to teaching electronics in the industrial arts courses is to develop basic concepts of:

- first, the total system, e.g., record player, superhet, etc.
- second, the units that comprise the system, e.g., power supply, amplifier, oscillator
- third, the components that make up the units, e.g., resistors, capacitors, inductors, etc.
- fourth, the physical laws that are operative in the function of the whole system.

Specific Objectives

1. To teach the correct use of common and special instruments and the principles involved.
2. To familiarize students with some of the basic electronic circuits and their applications.
3. To familiarize students with the basic principles and fundamentals of radio and television communications and computer systems.

ELECTRONICS 10

Unit I.—Basic Electricity-Electronics

1. Instrument use: V.O.M., V.T.V.M., Oscilloscope, Ammeter, Voltmeter, Signal Generator
2. Measurement of: current, voltage, resistance
3. Study minimum of two systems from
 - Record Player
 - T.R.F.
 - Superheterodyne
 - Computer
4. Overview of system to include:
 - Input — classification, A.F. or R.F., wave form, strength
 - Output — classification, wave form, strength
 - Identification of units within system

Unit II.—Systems Study

1. Study three system not studied above from: record player, T.R.F., superheterodyne, computer, transmitter, transistor radio, video, F.M., electronic control. Each to be studied as suggested in (4) above (Unit I)
2. Study basic principles of the following units:
 - Power Supply
 - Amplifier
 - Oscillator

Unit III.—Units of a System

1. Assemble, test and compare units:
 - (a) Power supplies — half and full wave
 - (b) Amplifier — audio frequency
 - voltage and power
 - radio frequency
 - (c) Oscillator — Armstrong
 - Hartley

Unit IV.—Components of a System

1. Study components such as: resistors, capacitors, inductors, transformers, tubes, transistors for (a) characteristics
 - (b) construction and production
 - (c) values

ELECTRONICS 20

Unit I.—Systems Review

1. Review systems studied in Electronics 10 and study two additional systems
2. Review use of instruments to measure: voltage, resistance and current

Unit II. and III.—Units of a System

1. Study the power supply, amplifier and oscillator under the following headings:
 - types
 - function and analysis
 - principles of operation
 - applications

Unit IV.—Component Study

1. Study the following:
 - Ohm's law as it applies to D.C. and A.C. circuits
 - Capacitance in A.C. and D.C. circuits
 - Inductance in A.C. and D.C. circuits
2. Relate physical and mathematical principles to the components: resistors, capacitors, inductors, transformers, tubes, transistors

ELECTRONICS 30

Unit I. and II.—Computer Systems

Equivalent of one half year to be spent in the study of computer systems

Unit III. and IV.—Special Study

Students may spend one half year in research and development of special interest area of:

- industrial controls
- F.M.
- Video
- Computer

DRAFTING

Objectives

1. Provide exploratory experiences.
2. Develop basic skills.

DRAFTING 10

1. Reading working drawings and blueprints.
2. Use of drafting equipment.
3. Geometric constructions.
4. Working drawings — kinds.

DRAFTING 20

1. General review.
2. Geometric construction.
3. Orthographic plate involving circles or arcs of circles.
4. Isometric plate involving circles or arcs of circles.
5. Surface development.
6. Cabinet drawing.
7. One-point perspective drawing.
8. Two-point perspective drawing.
9. Architectural drafting.
10. Aircraft drafting.

INDUSTRIAL ARTS GRAPHIC COMMUNICATIONS 10, 20, 30

Introduction

In Graphic Communications a student will learn about the basic principles of Drafting, Printing, Duplicating and Photography and the interrelationship of the technologies within this cluster.

Specific Objectives

1. To provide an opportunity for students to learn about the basic materials and processes used in the graphics industry.
2. To give students practice in the approved methods and procedures required for drafting, printing, photography and duplicating processes.
3. To acquaint students with the opportunities in the field of graphic communications.

GRAPHIC COMMUNICATIONS 10

Unit I.—Drafting

1. Mechanical Processes — instrument use
2. Drawing Methods (introduction to)
 - Freehand drawing
 - Orthographic
 - Isometric
 - Pictorial
 - Sectional
 - Machine
 - Electrical
 - Sheet Metal
3. Material Processes
 - Tracing
 - Printing a Drawing
 - Copying Machines
4. Relationship to Industry

Unit II.—Photography

1. Composition and Design
 - Principles of composition
 - Lighting
 - Outdoor photography
2. Materials
 - Types of film
 - Papers
3. Cameras
 - Kinds
 - Parts
 - Functions
 - Use of light meter
 - Electronic flash
4. Material Processes
 - (a) Contact Printing
 - Chemicals
 - Paper
 - Procedures
 - (b) Enlarging
 - Types
 - Functions
 - Procedure
5. Relationship to Industry
 - Career opportunities

Unit III.—Printing and Reproducing Processes

1. Composition and Design
 - Basic type families
 - Terms used
 - Making a layout
2. Materials
 - Paper used
 - Inks
3. Mechanical Processes
 - Typesetting
 - Platen Press
 - Sign Press

Unit IV.—Printing (Continued)

1. Mechanical Processes
 - Kinds of printing, letterpress, intaglio, lithography, flat bed press, cylinder press, rotary press
2. Material Processes
 - Stencil preparation
 - Offset principles
 - Types of masters and their preparation; direct image, transfer image, photographic
 - Principles of copying machines

GRAPHIC COMMUNICATIONS 20

Unit I.—Drafting

1. Mechanical Processes
 - Function and use of drafting machine
2. Projection Methods
 - Orthographic — dimensioning
 - Isometric — from orthographic
 - Pictorial — parallel perspective
 - Sheet Metal — development of curved surfaces
 - Sectional — conventional lines and symbols
 - Architectural — basic principles
 - Machine — threads and other forming methods
 - symbols

Unit II.—Photography

1. Composition criteria for:
 - landscapes
 - portraits
 - still life
 - animals
 - plants
2. Materials
 - Film characteristics
3. Mechanical and Material Processes
 - Properties of light
 - Lenses
 - f-stop
 - Types of cameras
 - Enlargers and enlarging
 - Filters and their use
 - Camera use and practice

Unit III. and IV.—Printing and Reproducing Processes

1. Composition and Design
 - Preparation of art work for lithography
2. Material Processes
 - Preparation of photographic masters
 - Production of transparencies
 - Silk screen printing

GRAPHIC COMMUNICATIONS 30

Unit I.—Drafting

1. Architectural drawing
2. Machine drawing
3. Topographical
4. Pictorial
5. Tracing and printing

Unit II.—Photography

1. Applications of photography to: commercial, illustration, portraiture, press, police, industrial, nature
 - Roentgenography
 - Infra-Red
 - Process camera work
2. Darkroom controls and techniques
3. Photography as related to the offset press
4. Print finishing
5. Color photography
6. Motion picture photography

Unit III.—Printing

1. Practical application of offset work in industry
 - manufacturing
 - buying
 - distributing
 - administration and accounting
2. Running an offset press

Unit IV.—Printing (Continued)

1. Producing a complete printed project
 - set up the management and labor organizations to produce a paper.

INDUSTRIAL ARTS POWER MECHANICS 10, 20, 30

Introduction

Power mechanics is the study of the sources and transmission of power. Through the reading and activity the student will engage in as he progresses through these units of study, he will gain a concept of the meaning of work, energy and power.

Specific Objectives

1. To help the student understand and relate the many basic laws and principles of science as they apply to power technology.
2. To familiarize the student with the construction and requirements of machines which convert energy to useful work.
3. To develop problem solving skills related to machines and their operations.
4. To help students understand the use, care and control of the power machine.

POWER MECHANICS 10

Unit I.—Power Sources

1. Concepts of power

- Definition of work, energy, horsepower, torque
- Introduction to measurement of rotational power

2. Principles of operation

Two systems should be chosen for study from the ones listed below:

- (1) 4-stroke cycle gas
- (2) 2-stroke cycle gas
- (3) 4-stroke cycle diesel
- (4) 2-stroke cycle diesel
- (5) Wankel rotary engine

Each system to be analyzed and studied to isolate the principles related to:

- (a) carburetion
- (b) ignition
- (c) lubrication
- (d) cooling

3. Control and analysis

- (a) Factors of power output
 - brake mean effective pressure
 - displacement of cylinders
 - piston speed

(b) Law of definite proportions

(c) Limitations of piston and crankshaft type engines

4. Practical applications of power sources

Unit II.—Power Sources

1. Study of electric motors and three other sources of power not included in Unit I selected from the following:

- turbines
- jets
- rockets
- nuclear
- steam

2. The study of each system should consider

- (a) Concept of power
- (b) Principles of operation
 - carburetion
 - ignition
 - lubrication
 - cooling
- (c) Control and analysis
- (d) Applications

Unit III.—Hydraulics and Pneumatics

1. Basic Principles
 - Pascal's Law
 - Problems in area
 - Concept of pressure
 - Principles of flow and properties of fluids
2. Basic Hydraulic Circuitry
 - Single acting cylinder
 - Double acting cylinder
 - Use of valves
3. Principles of Pneumatic circuits
4. Applications of pneumatics
5. Fluidics

Unit IV.—Mechanical Transmission

1. Principles of mechanics
 - Mechanical advantage
 - Directional changes in power transmission
 - Efficiency of transmission
 - Linear measurement of power
 - Calculation of torque and power
2. Transmission of power through:
 - belts
 - chain devices
 - gears and shafts
3. Clutching devices
 - dog
 - sliding gear
 - centrifugal
 - cone
 - single plate
 - multiple discs
4. Principles of power transmission through: shafts, cables, cams, rods, air screws, water screws, axles, wedges

POWER MECHANICS 20

Unit I.—Power Sources

1. Study two systems from the following not studied in Power Mechanics 10:
 - (a) 4-stroke cycle gas
 - (b) 2-stroke cycle gas
 - (c) 4-stroke cycle diesel
 - (d) 2-stroke cycle diesel
 - (e) Wankel rotary engine
2. Study each system as outlined in Unit I, Power Mechanics 10.

Unit II.—Electric Power

1. Overview of the principles of electric motors and generators, A.C. and D.C.
2. Units and components of the generator and their functions—field, armature, frame, brushes
3. Principles of magnetic forces
4. Principles and characteristics of different types of motors
5. Fuel cell—operating principles, parts, merits
6. Chemical cells—primary and secondary cells
—limitations
7. Thermocouples
8. Solar cells—principles of operation

Unit III.—Hydraulic and Pneumatics

1. Bernoulli's Theorem
2. Types of valves
3. Sealing devices
4. Accumulators
5. Motors
6. Pumps
7. Methods of flow control
8. Laws of gases

Unit IV.—Electrical Transmission

1. Concepts of the interrelationships between mechanical and electrical power
2. Transformer action
3. Power loss in lines
4. Principles and operation of: thermostats, humidistats, barostats, and hydrostats

POWER MECHANICS 30

Unit I. and II.—Power Sources

1. Students to make a study in depth of two power source systems of their choice.

Unit III. and IV.—Power Transmission

2. Students to make a study in depth of two transmission systems chosen from the following:
 - Hydraulics
 - Pneumatics
 - Electrical transmission
 - Mechanical

LANGUAGES OTHER THAN ENGLISH

Introductory Statement

A second language may be introduced at the Junior High School level on an elective basis, either as a Group A option or as a Group B option. When a language is offered as a Group B option, it should conform to the principles underlying this classification as outlined in the Junior-Senior High School Handbook. The implementation of a Group B option will vary from school to school dependent upon the human and material resources available.

However, when a second language is offered as a Group A option, every effort should be made to have the program integrated with programs of the Senior High School. An integrated language program is essential if students are to continue in a second language program.

In the Junior High Schools, one of the following alternatives should be considered for implementing a language program on a Group A option basis:

- a. Two years:
 - (i) Grades 7 and 8
 - (ii) Grades 8 and 9
 - (iii) Grades 7 and 9
- b. Three years: Grades 7, 8 and 9.

While it is unrealistic to hold that all students will become equally proficient in the use of the new language they are learning, longer sequences of language study should enable students to use the language with greater facility than if they had studied it for shorter periods of time. Students who have previously studied another language while in the Junior High School, should be placed in an appropriate language course upon entering the Senior High School.

In order to help teachers and administrators implement integrated language programs, curriculum guides have been prepared for French, German and Ukrainian. These guides suggest language content and expected linguistic behaviour for each of three different levels of language proficiency.

Beginning in 1975, language content and expected linguistic behavior will be included in the Program of Studies for each of three levels of language development. For 1974-75 the content suggested for each course reflects a continued "chapter" or "unit" approach, but it should be emphasized that these suggestions are intended as average coverage only. Some students in some classes will do more, some less, depending upon many factors related to language learning.

SEQUENTIAL PROGRAMS

Objectives

The long range goals in the study of modern languages other than English are effective communication and cultural understanding. The specific goals are:

- a. To understand the language when spoken at normal speed on a subject within the range of a student's experience.
- b. To speak well enough to communicate with a native speaker on a subject within the range of the student's experience.
- c. To write, using authentic patterns of the language.
- d. To read with direct understanding, without recourse to English translation, material on a general subject.
- e. To understand linguistic concepts, such as the nature of language and how it functions through its structural system.
- f. To understand, through the language, the contemporary values and behavior patterns of the people whose language is being studied.
- g. To acquire an understanding of the significant relationships between the features of the area or country (geographic, economic, political, historical) and the language itself.
- h. To develop an understanding of the literary and cultural heritage of the people whose language is studied.¹

¹Adapted from *Guidelines for NDEA, Title III*, issued by the U.S. Department of Health, Education and Welfare, Bureau of Educational Assistance Programs, January, 1965.

FRENCH

Recommended Instructional Materials

<i>A-LM Level I (Revised Edition)</i>	French 11	French 10
<i>A-LM Level II (Revised Edition)</i>	Units 13-20	Units 1-9
<i>Ecouter et Parler (Revised Edition 1970)</i>	Units 12-16	Units 1-8
<i>Chez les Français (1969)</i>	Chapitres 1-3	
<i>Voix et Images de France</i>	Lessons 16-25	Lessons 1-10
<i>A-LM Level I (Revised Edition)</i>	French 21	French 20
<i>A-LM Level II (Revised Edition)</i>	Units 21-26 and appropriate support materials	Units 10-15 Units 16-18
<i>Ecouter et Parler (Revised Edition 1970)</i>		Units 9-16
<i>Chez les Français (1969)</i>	Chapitres 4-10	
<i>Voix et Images de France</i>	Lessons 26-32 and 3 supplementary readers chosen from the 1,500 word category of the Lire et Savoir series and/or other appropriate support materials.	Lessons 11-21
<i>A-LM Level II (Revised)</i>	French 30	
<i>Chez les Français (1969)</i>	19-26	
<i>Voix et Images de France</i>	Chapitres 1-10	
<i>Premier degré</i>		Lessons 22-32

French 31 should attempt to further the long range goals of learning a second language, namely, effective communication and cultural understanding. While the development of linguistic skills should continue, the emphasis should be on the development of an understanding and appreciation of the French way of life, especially as it is experienced in Canada. Teachers are encouraged to use a variety of methods and materials to achieve this goal. French 30 is a prerequisite or corequisite for French 31, although in some schools it will be offered to students who have successfully completed French 21.

Insofar as Canadian materials are available, the emphasis of the course will be on the civilization and culture of French-speaking people in Canada. The following areas may be developed with the instructional materials suggested:

1. The use of Canadian newspapers and periodicals in the French language.
2. The use of French as a language of everyday communication in such areas as business, commerce, education, politics, recreation, etc.
3. Studies in the area of Canadian literature and drama originating in the French language.
4. The development of units of study in certain disciplines such as the social sciences, music, drama, etc.

In addition, the following areas related to the civilization and culture of France and other French-speaking countries may be explored:

1. French literature and drama.
2. French language newspapers and periodicals.
3. Cultural topics selected from the recommended instructional materials utilized in earlier grades, such as Audio-Lingual Materials; Holt, Rinehart and Winston Materials or Didier Materials.

It is suggested that a wide variety of resources will be used to implement this program such as the use of printed and audio-visual materials and also the utilization of French-speaking people and resources of communities. Allowance should be made for differentiated instruction so that all students in one class are not necessarily exposed to the same learning experiences.

Recommended instructional materials to implement French 31 are included in the document entitled French 31: Supplement to 1970 Secondary School Curriculum Guide for French as a Second Language.

GERMAN

Recommended Instructional Materials

	German 10
<i>A-LM, Level One (Second Edition)</i>	Units 1-9
or	
<i>Verstehen und Sprechen (1962)</i>	Lessons 1-12
	German 20
<i>A-LM, Level One (Second Edition)</i>	Units 10-15
and	
<i>A-LM, Level Two (Second Edition)</i>	Units 16-18
or	
<i>Verstehen und Sprechen (1962)</i>	Lessons 12-20
and	
<i>Sprechen und Lesen (1963)</i>	Chapters 1-8
or	
<i>Foundation Course in German (Revised Edition)</i>	Units 1-13 and Review Lessons 1 and 2
	German 30
<i>A-LM, Level Two (Second Edition)</i>	Units 19-27
or	
<i>Foundation Course in German (Revised Edition)</i>	Units 14-25 Review Lessons 3 and

GERMAN 31

INTRODUCTORY STATEMENT

German 31 aims to further the objectives suggested for the learning of modern languages, viz. effective communication and cultural understanding. While encouraging flexibility both in approach and selection of instructional materials, the program should reflect a greater concern for cultural understanding and an appreciation of the German way of life rather than the exclusive development of linguistic skills. German 30 is a prerequisite or corequisite for German 31.

Although a number of areas are identified for curriculum development, and instructional materials are suggested for these areas, teachers and students should be encouraged to develop units of study which they might consider more suitable for their class. The following areas may be developed with the instructional materials suggested:

1. Studies in the area of contemporary life in Germany and/or German-speaking communities in Canada.
2. Studies in classical and contemporary German literature.
3. The use of German as a language of everyday communication in such areas as business, science, recreation and education.
4. A study of German language newspapers and periodicals.
5. Leisure reading in the field of adventure, mystery and suspense.

It is suggested that a wide variety of resources will be used to implement this program such as the use of printed and audio-visual materials and also the utilization of German-speaking people and resources of their communities. Allowance should be made for differentiated instruction so that all students in one class are not necessarily exposed to the same learning experiences.

Recommended instructional materials to implement German 31 are included in the document entitled German 31: Supplement to 1970 Secondary School Curriculum Guide for German.

FRENCH 31

INTRODUCTORY STATEMENT

French 31 should attempt to further the long range goals of learning a second language, namely, effective communication and cultural understanding. While the development of linguistic skills should continue, the emphasis should be on the development of an understanding and appreciation of the French way of life, especially as it is experienced in Canada. Teachers are encouraged to use a variety of methods and materials to achieve this goal.

Insofar as Canadian materials are available, the emphasis of the course will be on the civilization and culture of French-speaking people in Canada. The following areas may be developed with the instructional materials suggested:

1. The use of Canadian newspapers and periodicals in the French language.
2. The use of French as a language of everyday communication in such areas as business, commerce, education, politics, recreation, etc.
3. Studies in the area of Canadian literature and drama originating in the French language.
4. The development of units of study in certain disciplines such as the social sciences, music, drama, etc.

In addition, the following areas related to the civilization and culture of France and other French-speaking countries may be explored:

1. French literature and drama.
2. French language newspapers and periodicals.
3. Cultural topics selected from the recommended instructional materials utilized in earlier grades, such as Audio-Lingual Materials; Holt, Rinehart and Winston Materials or Didier Materials.

It is suggested that a wide variety of resources will be used to implement this program such as the use of printed and audio-visual materials and also the utilization of French-speaking people and resources of communities. Allowance should be made for differentiated instruction so that all students in one class are not necessarily exposed to the same learning experiences.

SUGGESTED INSTRUCTIONAL MATERIALS

The materials listed in this section are intended only as suggestions for teachers who are searching for aids which may help them implement a more meaningful program. They are not intended to be all inclusive.

The listed textual materials will not be stocked by the School Book Branch but can be obtained through special order.

A. PRINTED MATERIALS

1. NEWSPAPERS, PERIODICALS AND REVIEWS:

- Le Devoir* — Montreal, Quebec
- Le Droit* — Ottawa, Ontario
- L'Evangeline* — Moncton, New Brunswick
- Le Franco Albertain* — Edmonton, Alberta
- Le Magazine MacLean*
- La Patriote* — Winnipeg, Manitoba
- La Presse* — Montreal, Quebec
- Sélections du Readers' Digest
- Sept Jours*

Note: Prices are approximate and subject to change without notice.

2. LANGUAGE OF EVERYDAY COMMUNICATION AND SOCIAL SCIENCES:

Bonnell and Sedwick. <i>Conversation in French: Points of Departure</i> . American Book Company, 120 pp. -----	\$2.80
Chaput-Rolland, Solange. <i>Mon pays, Quebec ou le Canada</i> . Le Cercle du Livre de France -----	\$2.25
Dubuc, Carl. <i>Lettre à un Français qui veut Emigrer au Quebec</i> . Editions du Jour, 1968, 158 pp. -----	\$2.00
Heather, Monique. <i>Lettres pour vous</i> . Macmillan of Canada, 34 pp. -----	\$0.80
Hickman, Mentha and Moreau. <i>Le Quebec, Tradition et Evolution</i> , Volume I. W. J. Gage Limited, 1967, 171 pp. -----	\$3.50
Hickman, Mentha and Moreau. <i>Le Quebec, Tradition et Evolution</i> , Volume II. W. J. Gage Limited, 1967, 220 pp. -----	\$3.50
Houde, Pierre. <i>Hull et l'ouest du Quebec</i> . Holt, Rinehart and Winston, 1970 -----	\$1.50
Ingersoll, Carson, traduit par Chartrand. <i>L'Industrie de la Sardine au Nouveau Brunswick</i> . Ginn. -----	\$0.80
Lavallée, Jean. <i>Laval, Ville Nouvelle</i> . Holt, Rinehart and Winston, 1969. -----	\$1.50
Lavallée, Jean. <i>Granby, Centre Industriel</i> . Holt, Rinehart and Winston, 1969. -----	\$1.10
Mountjoy, M. E. <i>Regardez et Ecrivez</i> . J. M. Dent and Sons, 1969, 104 pp. -----	\$2.90

3. LITERATURE AND DRAMA:

Howard, Françoise. <i>Tour d'Horizon</i> (An anthology of prose and poetry from France and Canada). J. M. Dent and Sons. -----	\$2.95
Pallascio-Morin, Ernest. <i>Demain tu n'Auras plus un Instant</i> . Holt, Rinehart and Winston Ltd., 1967, 62 pp. -----	\$2.00
Phelps, Anthony. <i>Points Cardinaux</i> . Holt, Rinehart and Winston Ltd., 1966, 60 pp. -----	\$2.00
Weber, Hathorn and Johnson. <i>Poesie de la France et du Canada Français</i> . Longman Canada Limited, 1969, 427 pp. -----	

4. RECREATIONAL AND LEISURE TIME READING:

Corriveau, Monique. <i>Max</i> . Copp Clark Publishing Company, 1966, 134 pp. -----	
Corriveau, Monique. <i>Max au Rallye</i> . Bellhaven House, 1968. -----	\$2.50
Hood, Hugh. <i>Puissance au Centre</i> , Jean Beliveau. Prentice Hall, 1970. -----	
Pimsleur, Paul. <i>C'est la vie, lectures d'aujourd'hui</i> . Harcourt, Brace and World. -----	\$3.00
<i>Passe-Partout</i> . Livres, Revues et Presse, Inc., Montreal. -----	
Schulz, Charles M. <i>Ca ne va pas, Charlie Brown</i> . Holt, Rinehart and Winston Ltd., 1970. -----	\$1.75
Schulz, Charles M. <i>Reviens, Snoopy</i> . Holt, Rinehart and Winston Ltd., 1969. -----	\$1.75
Schulz, Charles M. <i>Vas-y, Charlie Brown</i> . Holt, Rinehart and Winston Ltd., 1969. -----	\$1.75

B. FILMS

- Un Autre Pays*. NFB. French version of *The Drylanders*.
- Cent fois sur le Metier*. NFB.
- Maitres Artisans du Canada*. NFB.
- Le Quebec en Silence*. NFB.
- Le Quebec Vu par Cartier-Bresson*. NFB.

C. FILMSTRIPS

<i>Montreal. Ville Fluviale.</i> NFB.	-----	\$5.00
<i>Le Quebec — La Plaine du St-Laurent.</i> NFB.	-----	\$5.00
<i>Le Quebec — Le Plateau Laurentien.</i> NFB.	-----	\$5.00
<i>Le Quebec — Les Appalaches.</i> NFB.	-----	\$5.00
<i>Le Quebec.</i> National Geographic Society. Encyclopedia Britannica Educational Corporation.	-----	\$17.00

D. TAPES AND RECORDS

French-Canadian songs on tape by Albert Lafrance. Audio-Visual Services Branch, Department of Education, Edmonton.
Anthology of Songs. Readers' Digest.
Chanson D'Acadie. Folkways Records, Album No. FW6923.

E. TEACHER REFERENCES

Bélisle, Louis A. <i>Le Francais des Affaires.</i> Bélisle Editeur Inc., 1970.		
Bessett, G., L. Geslin and C. Parent. <i>Histoire de la Litterature Canadienne-Française.</i> Centre Educatif et Culturel Inc., 1968, 704 pp.		
Clas, A., Paul A. Horguelin. <i>Le Francais, Langue des Affaires.</i> McGraw-Hill, 1969.		
Dwayne, M. and A. Clas. <i>Mon Dossier de Francais I.</i> McGraw-Hill, 1970.		
Fontenay, Henri. <i>La Bonne Correspondance.</i> Fernand Nathan, 1966, 317 pp.	-----	\$4.45
Sirois, Antoine. <i>Montreal dans le Roman Canadien.</i> Marcel Didier.	-----	\$6.30

GERMAN

It is suggested that teachers of German obtain a copy of the publication entitled "Curriculum Newsletter with Respect to German 10, 20 and 30" which was distributed to schools in June, 1972. This publication is available from the Curriculum Branch, Department of Education.

GERMAN 10**Suggested Text**

Rehder, Thomas, Twaddell, O'Connor. *Deutsch Verstehen und Sprechen.* 1962.

Related Materials

Use of all teaching aids prepared by the authors to accompany the textbook is strongly recommended; the Teacher's Edition, the Übungsbuch and the Tape Recordings offer invaluable assistance in teaching this course.

GERMAN 20**Suggested Texts**

Rehder, Thomas, Twaddell, O'Connor. *Deutsch: Sprechen und Lesen.* 1963.

or

Homberger-Ebelke. *Foundation Course in German.* Heath. Revised Edition. Units 1-13 inclusive and review lessons 1 and 2.

Related Materials

Use of all teaching aids prepared by the authors to accompany either of the recommended textbooks is recommended; e.g. Teacher's Manual, Tape Recordings, etc.

GERMAN 30

Suggested Text

Homberger-Ebelke. *Foundation Course in German*. Heath. Revised Edition. 1964.

Related Materials

The additional instructional materials accompanying this text are also recommended.

NOTE:

The text, *Contemporary German*, First Edition, by Scherer and Wangler is out of print. It can still be used as a recommended text for German 20 and 30 if copies are available. Correspondence students will continue using this book as a basic text for 1972-73.

The German 30 Departmental Examination in 1972-73 will be based on structure concepts and vocabulary items common to both *Foundations in German* and *Contemporary German*.

GERMAN 31

INTRODUCTORY STATEMENT

German 31 aims to further the objectives suggested for the learning of modern languages, viz. effective communication and cultural understanding. While encouraging flexibility both in approach and selection of instructional materials, the program should reflect a greater concern for cultural understanding and an appreciation of the German way of life rather than the exclusive development of linguistic skills.

Although a number of areas are identified for curriculum development, and instructional materials are suggested for these areas, teachers and students should be encouraged to develop units of study which they might consider more suitable for their class. The following areas may be developed with the instructional materials suggested:

1. Studies in the area of contemporary life in Germany and/or German-speaking communities in Canada.
2. Studies in classical and contemporary German literature.
3. The use of German as a language of everyday communication in such areas as business, science, recreation and education.
4. A study of German language newspapers and periodicals.
5. Leisure reading in the field of adventure, mystery and suspense.

It is suggested that a wide variety of resources will be used to implement this program such as the use of printed and audio-visual materials and also the utilization of German-speaking people and resources of their communities. Allowance should be made for differentiated instruction so that all students in one class are not necessarily exposed to the same learning experiences.

SUGGESTED INSTRUCTIONAL MATERIALS

The materials listed in this section are intended only as suggestions for teachers who are searching for aids which may help them implement a more meaningful program. They are not intended to be all inclusive.

The listed materials will not be stocked by the School Book Branch.

NOTE: Prices are approximate and are subject to change without notice.

A. PRINTED MATERIALS

1. The following references are recommended for studies in the area of contemporary life in Germany and/or German-speaking communities in Canada:

Buckley, R. W. <i>Nur Zwanzig Mark</i> . University of London Press, 1967.	
Drath, V. H. and O. G. Graf. <i>Typisch Deutsch</i> . Holt, Reinhart and Winston.	
Goedsche and Glaettli. <i>Beethoven</i> . Van Nostrand Reinhold Company, 1963.	\$1.40
Goedsche and Glaettli. <i>Schweitzer</i> . Van Nostrand Reinhold Company, 1957.	\$1.20
Kellett, Freda. <i>Zum Nacherzählen</i> . University of London Press, 1963.	
Lunt, P. G. <i>Udo fährt nach Köln</i> . Macmillan, 1969.	
Modern Languages Materials Development Staff. <i>Reading for Meaning</i> . Harcourt, Brace and World, 1966.	
Steinhauer, Harry. <i>Deutsche Kultur, ein Lesebuch</i> . Oxford University Press, 470 pp.	\$5.50
Zobel, K. and R. Griffel. <i>Klein Deutsche Typologie</i> . Holt, Rinehart and Winston.	

2. The following references are recommended for studies in classical and contemporary German literature:

Brecht, Berhold. <i>Leben des Galileo</i> . Heineman Educational Books.	\$2.00
Brecht, Berhold. <i>Mutter Courage und ihre Kinder</i> . Heineman Educational Books	\$1.80
Dürrenmatt, Friedrich. <i>Der Besuch der Alten Dame</i> . Methuen and Company	
Dürrenmatt, Friedrich. <i>Die Panne, der Tunnel</i> . Oxford University Press.	\$2.25
Frisch, Max. <i>Andorra</i> . Methuen and Company.	
Goedsche and Seiferth. <i>Deutschland — Vergangenheit und Gegenwart</i> . American Book Company, 1964.	
Goedsche and Spann. <i>Humboldt</i> . American Book Company, 1966.	
Goes, Albrecht. <i>Unruhige Nacht</i> . Macmillan.	\$1.50
Kafka, Franz. <i>Short Stories</i> . Oxford University Press.	\$1.50
<i>Short Monographs on German Authors</i> — Thomas Mann, Heine, Kafka, Rilke, American Book Company.	
Steward, David. <i>German Poetry from Luther to Brecht</i> . Ryerson Press.	\$3.10
Tracy, Gordon L. and Alex Anderson. <i>Dauer im Wechsel — A Critical Anthology of German Literature from Brant to Brecht</i> . D. C. Heath and Company.	
Von Hofe, Harald. <i>Faust: Leben, Legende und Literatur</i> . Holt, Rinehart and Winston.	
Waidson, H. M. <i>German Short Stories 1955-1965</i> . Macmillan.	\$1.95

3. The following references are recommended for using German as a language of everyday communication:

Cesare, Ruth de. <i>Lieder für die deutsche Klasse.</i> Holt, Rinehart and Winston.	\$1.20
Happen, Jürgen. <i>Gestern und Heute.</i> Longmans, 1968.	\$1.55
Hammond, Robin T. <i>Fortbildung in der deutschen Sprache.</i> Oxford University Press, 1969, 196 pp.	\$4.00
Oakley and Oschatz. <i>Briefe aus Oberhausen.</i> Macmillan Company, 1970.	\$1.40
Williamson, A. <i>Wir spielen Theater.</i> D. C. Heath.	

4. The choice of German language newspapers and periodicals is left to the initiative of the teachers.

5. The following references are recommended for leisure reading in the field of adventure, mystery and suspense:

Frobeniur, L. <i>Donner, Blitz und Claudia.</i> Longmans Canada Ltd.	\$1.15
Harrer, Heinrich. <i>Sieben Jahre in Tibet.</i> William Heineman Ltd.	\$1.80
Keast and Keast. <i>Die Jagd in den Bergen.</i> Clarke, Irwin and Company.	\$0.70
Keast and Keast. <i>Zweifacher Tod in den Bergen.</i> Clarke, Irwin and Company.	\$0.70
Kästner, E. <i>Das doppelte Lottchen.</i> Oxford University Press.	\$1.25
Martell, G. <i>Die Spuhr führt in unsere Stadt.</i> Macmillan and Co. Ltd.	\$1.25
Schwenger, W. <i>Die unheimliche Kiste.</i> Oxford University Press.	\$0.95

6. A catalogue of short plays is available from:
 Deutscher Laienspiel-Verlag
 Weinheim/Bergstrasse
 Germany.

B. FILMS

Catalogues of films are available upon request from the German Consulate in Edmonton and the German National Tourist Office in Montreal.

C. TAPES

Tape lists are available from the German Consulate in Edmonton.

LATIN

Objectives

The specific objective of a program in any second language is to enable the learner to acquire a proficiency in a language other than his tongue. For the study of Latin, this takes the form of gaining proficiency in:

- (a) Reading and understanding Latin.
- (b) Learning more about his own language.
- (c) Learning about the ancient world and its values.
- (d) Comparing and contrasting his own values with those of the ancient world.
- (e) Appreciating the immense contribution of Latin to the English vocabulary.

A. SUGGESTED COURSE CONTENT IN THE JUNIOR HIGH SCHOOL GRADES

Text

Page and Beckett, *Gateway to Latin, I and II*. At the end of the Junior High school Latin program it is suggested that the students complete all of *Gateway to Latin I* and the first sixteen chapters of *Gateway to Latin II*.

B. SUGGESTED COURSE CONTENT IN THE SENIOR HIGH SCHOOL GRADES

Latin 10

Text

Breslove and Hooper. *Latin for Canadian Schools*.

Suggested Course Content

Lessons 1 - 27 inclusive; the last exercises in each lesson need not be emphasized, but knowledge is essential of: the first three declensions of nouns; the cases of nouns and their functions; the three declensions of adjectives; the four conjugations in the active in all tenses of the indicative, the imperative, the infinitive; questions; connectives, subordinate clause with *ubi*, *antequam*, *priusquam*, *simulat que*, *cum primum*, *dum*, *si nisi* and *cum*; prepositions; place and time expressions.

Latin 20

Text

Breslove and Hooper. *Latin For Canadian Schools*.

Suggested Course Content

Lessons 28 - 55 inclusive; the last exercises in each chapter need not be emphasized. Derivative studies should be done orally. Relative, interrogative, demonstrative, reflexive and intensive pronouns should be taught for reading recognition and use rather than have the students memorize the paradigms.

Latin 30

Text

Breslove and Hooper. *Latin for Canadian Schools*.

Suggested Course Content

Lessons 56 - 78 inclusive. The English to Latin should be reduced to a minimum; omit recall and grammatical work on adverbs of place, compounds of *fero*, and subordinate clauses in indirect discourse.

NOTE:

The Breslove and Hooper text is satisfactory for studying the core material in grammar, but in order to allow flexibility in the Latin Program, it is suggested that teachers be encouraged to utilize a large number of resource materials which emphasize the development of reading comprehension. In addition to the text, Latin readings in the following are examples recommended for this purpose, but this list is not exclusive. Of these, only *Selected Latin Readings* by Taylor and Prentice may be obtained through the School Book Branch. The others are available through the publishers only.

Selected Latin Readings — B. C. Taylor and K. E. Prentice, Dent

Using Latin — J. Gunmere, Longmans

Lingua Latina — H. O. Oerberg, Nature Method Language Institute (110 East 42 Street, New York) (Vol. I and II)

Civis Romanus — J. M. Cobban and R. Colebourne, Methuen

Sodales Duo — A. O. Nash-Williams, Cambridge University Press

First Year Latin — C. Jenny, Macmillan

Romani Apud Se — G. C. Lightfoot, Macmillan

Elementary Latin Translation Book — Rev. A. E. Hallard, Copp Clark

Tironibus — G. M. Lyne, Edward Arnold, London, England

Balbus — G. M. Lyne, Edward Arnold, London, England

First Reading Book — G. M. Lyne, Edward Arnold, London, England

Collins' Latin Dictionary — Collins, Toronto

NOTE:

1. Students who have successfully completed the minimum content suggested for the Junior High School Latin program should register in Latin 20.
2. Teachers who are recommending students for Latin 20 should ensure that the suggested course content for Latin 10 as outlined in the Program of Studies has been completed.

UKRAINIAN

Recommended Instructional Materials

<i>Ukrainian by the Audio-Visual Method, Part I</i>	Ukrainian 10 Lessons 1-14
or	
<i>Ukrainian for Beginners and Conversational Ukrainian</i>	Lessons 1-12
or	
<i>Ukrainian by the Audio-Visual Method, Part I</i>	Ukrainian 20 Lessons 15-25
or	
<i>Conversational Ukrainian and appropriate supplementary materials</i>	Lessons 13-24
or	
<i>Conversational Ukrainian and appropriate involvement and support materials</i>	Ukrainian 30 Lessons 25-35

UKRAINIAN 31

Ukrainian 31 is intended to further the objectives suggested for the learning of a second language, namely cultural understanding and effective communication. Ukrainian 30 is a prerequisite or corequisite for Ukrainian 31.

Rather than introducing new language concepts, the program in Ukrainian 31 should emphasize a concern for understanding the Ukrainian way of life as well as the improvement of skills previously acquired.

Recommended instructional materials to implement Ukrainian 31 are included in the Curriculum Guide along with suggested learning strategies.

Evaluation

Evaluation should be a continuous process by which attainment of objectives is assessed. Since the learning of a second language assumes a progression from simple to more complex behavior, the initial period of instruction should be primarily oral. Therefore, students will be expected to progress from the ability to demonstrate oral discrimination, through verbal and motor activities which demonstrate comprehension, to free conversation based on their range of experiences. Included in this progression is reproduction of modeled sounds, answers to direct short questions and comprehension of original utterances. Testing, then should be based on pronunciation and non-written expressions.

As reading and writing are added, they too will have to be tested and thus evaluation will become formalized. Although listening and comprehension will still be important, students will have to demonstrate control of written vocabulary, phonological elements and grammatical concepts. Teachers should attempt to balance testing techniques to include recognition, comprehension, recall and creative responses.

FRENCH as the LANGUAGE
of
INSTRUCTION

The following materials are now available in the French translations and are recommended for use.

Biology

Weisz. *Eléments de Biologie*.

Weisz. *Guide Methodologique*.

The text and the teaching guide have been translated and adapted from the second edition of the text *Elements of Biology* by Weisz. These materials are published by McGraw-Hill.

Business Education

Ernestine, Sister Marie. *Stenographie Gregg*.

Ernestine, Sister Marie. *Exercises de Stenographie Gregg*.

Ernestine, Sister Marie. *Transcription de la Stenographie Gregg*.

These materials are the French adaptation of the Diamond Anniversary Collection of Gregg Shorthand.

Chemistry

Pimental, G. C. *La Chimie, Science Experimentale*.

La Chimie, Science Experimentale:

—Feuille de reponses

—Solutionnaire

—Examen No. 1, 2, 3, 4, 5

—Cahier de rapport

—Cahier de laboratoire.

Noms, formules et charges de quelques ions—Chart.

Potentiels normaux d'oxydoreduction—Chart.

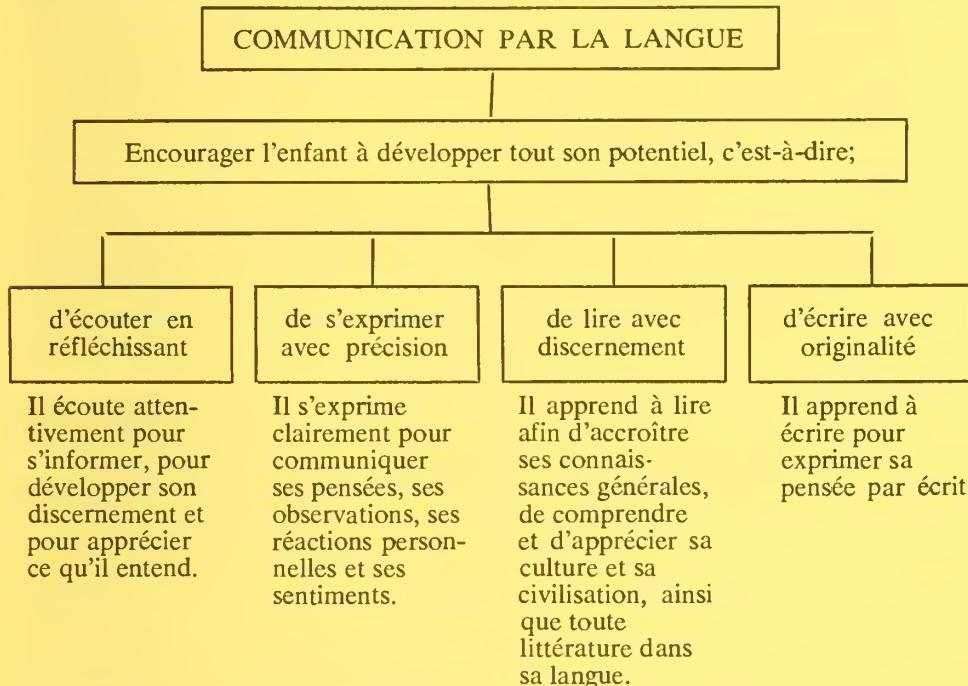
The French language edition of *Chemistry, An Experimental Science* is published by Le Centre de Psychologie et de Pedagogie, Montreal, with the authorization of the copyright owner.

LANGUE ET LITTERATURE

OBJECTIF GENERAL

Communiquer non seulement les pensées, mais encore les émotions de l'individu, telle est la fonction fondamentale de la langue. Pour communiquer pleinement, l'élève doit s'engager tout entier dans l'acte de communication en se sensibilisant à l'usage précis et nuancé de la langue. On stimulera son enthousiasme et son amour-propre pour qu'il exprime clairement et aisément ses expériences, ses idées et ses opinions personnelles.

Le tableau ci-dessous exprime sous forme schématique cet objectif général:



On envisagera l'apprentissage de la langue et de la littérature en tenant compte de l'élève, de son foyer, de la langue elle même et du rôle du maître dans la transmission des connaissances nécessaires à l'usage précis de la langue. Les titres ci-dessous ne sont que suggérés afin de permettre aux élèves et aux professeurs de développer un ensemble cohérent du contenu littéraire à une langue de communication.

A NOTER: Les prix ci-dessous mentionnés ne sont qu'approximatifs et sujet à changement.

REFERENCES DE BASE QUI SERVIRONT DE LA DIXIEME JUSQU'A LA FIN DE LA DOUZIEME (un exemplaire par élève):

- * Houziaux, J., R. Bergeron et J. Laferrière. *Précis méthodique de Grammaire française* (Les Editions françaises), 1966
- * Dagenais, G. *Dictionnaire des difficultés de la langue française au Canada* (Les Editions françaises), 1967
- * En réserve au School Book Branch. On peut aussi se procurer là les autres manuels ci-dessous par commande spéciale.

REFERENCES SECONDAIRES:

Bélisle, L. A. <i>Le Français des Affaires</i> (Bélisle Editeur), 1970	\$2.50
Bélisle, L. A. <i>Le Français des Affaires, Livre du Maître</i> . (Bélisle Editeur), 1970	\$4.00

REFERENCES A L'USAGE DES PROFESSEURS:

Vinay, J. P. et J. Darbelnet. <i>Stylistique comparée du français et de l'anglais</i> (Beauchemin), 1964	\$6.95
Tougas, G. <i>Littérature canadienne française contemporaine</i> (Oxford University Press), 1969	\$4.00
Legrant, L. <i>L'Enseignement du français à l'élementaire</i> , 2e édition (Délachaux et Niestlé, 32 rue de Grenelle, Paris VIIe)	
Clas, A. P. et P. A. Horguelin. <i>Le Français, Langue des Affaires</i> (McGraw-Hill), 1969	\$6.50
Baillargeon, S. <i>Littérature canadienne-française</i> , 3e édition (Fides), 1970	\$5.00
Bessette, G., L. Geslin et C. Parent. <i>Histoire de la Littérature canadienne-française</i> (Centre éducatif et culturel Inc.), 1968	\$4.75
Dwayne, M. et A. Clas. <i>Mon Dossier de français I, 2 et 5</i> (McGraw-Hill), 1970	
Bonneville, L. <i>Dossiers de Cinéma I, II et III</i> (Fides), 1968	\$3.50

DICTIONNAIRES:

- **Dictionnaire du français contemporain*, spécial enseignement, édition canadienne, relié (Les Editions françaises) à l'usage de l'élève
- **Dictionnaire du français contemporain* — J. Dubois et al (Les Editions françaises) à l'usage de la classe
- **Dictionnaire des verbes français* — Caput (Les Editions françaises)
- **Dictionnaire des Synonymes* (Larousse) — R. Bailly (Les Editions françaises)
- **Harrap's Shorter French and English Dictionary*, French-English, English-French. Complete in one volume (Clark Irwin and Company Ltd.)
- *En réserve au School Book Branch. On peut aussi se procurer là les autres manuels ci-dessous par commande spéciale.

LANGUE ET LITTERATURE 10

La Nouvelle

(au minimum, étude de dix contes ou nouvelles par an)

1. S. Cooper et al. <i>Contes français et Légendes canadiennes</i> (Macmillan), 1962	\$1.90
ou	
2. F. Leclerc. <i>Contes Adagio</i> (Fides), 1969	\$2.00
3. Guy de Maupassant. <i>Six Contes choisis</i> (D. C. Heath), 1936	\$1.60
4. C. R. Theodore et R. Legault. <i>Conteurs du Canada et de la France</i> (W. J. Gage), 1967	\$2.65

La Poésie

(une étude suggérée de différents genres de poésie)

Collection Deschamps. <i>Poésie, Manège d'étoiles</i> , Tome II	\$4.15
Livre du maître	\$3.85
(Centre de Psychologie et de Pédagogie), 1969	
ou	
K. L. Weber. <i>Poésie de la France et du Canada français</i> (Longmans), 1969	\$3.75

Le Roman

(au minimum, étude d'un roman par an)

Daudet, A. <i>Le petit chose</i> (Hachette Univ) Livre de Poche	\$0.90
Leclerc, F. <i>Pieds nus dans l'aube</i> (Fides), 1969	\$1.25
Primeau. <i>Dans le Muskeg</i> (Fides), 1960	\$0.75
Roy, G. <i>La petite poule d'eau</i> (Beauchemin), 1964	\$3.25

Le Théâtre

(au minimum, étude d'une pièce par an)

Corneille. <i>Horace</i> (Les Editions françaises) Classique Larousse	-----	\$0.45
Molière. <i>Le Malade imaginaire</i> (Les Editions françaises) Classique Larousse	-----	\$0.45
Racine. <i>Esther</i> (Les Editions françaises) Classique Larousse	-----	\$0.45

Le Film

(au minimum étude d'un film par an)

Le Boisé Ardent (ONF)**La Chanson Contemporaine et Folklorique**

(une étude choisie de plusieurs personnes mentionnées ci-dessous)

Calv�, Pierre	Leclerc, Felix
Charlebois, Robert	L�veill�e, Claude
D'Or, Georges	Mathieu, Mireille
Ferland, Jean-Pierre	S�vres, Christianne
Julien, Pauline	Vigneault, Gilles

LANGUE ET LITTÉRATURE 20**La Nouvelle**

(au minimum, étude de dix contes ou nouvelles par an)

1. Daudet, A. <i>Contes du lundi</i> (Hachette) Livre de Poche	-----	\$0.90
ou		
2. Theodore, C. R. et R. Legault. <i>Les Belles Histoires du Canada et de la France</i> (W. J. Gage), 1964	-----	\$2.65

La Poésie

(une étude suggérée de différents genres de poésie)

Collection Deschamps. <i>Poésie, Manège d'étoiles</i> , Tome II	-----	\$4.15
Livre du maître	-----	\$3.85
(Centre de Psychologie et de Pédagogie), 1969		
ou		
Weber, K. L. <i>Poésie de la France et du Canada Français</i> (Longmans), 1969	-----	\$3.75

Le Roman

(au minimum, étude d'un roman par an)

Gu�remont, G. <i>Le Survenant</i> (Fides), 1970	-----	\$1.25
Roy, G. <i>Rue Deschambault</i> (Beuchemin), 1964	-----	\$2.50
St-�xup�ry. <i>Pilote de Guerre</i> (Hachette Univ.) Livre de Poche	-----	\$0.90
Savard, F-A. <i>Menaud, Maître-draveur</i> , 4e édition (Fides), 1969	-----	\$1.25

Le Théâtre

(au minimum, étude d'une pièce par an)

G�linas, G. <i>Bousille et les justes</i> (Editions de l'Homme), 1960	-----	\$2.00
Corneille. <i>Polyeucte</i> (Les Editions françaises) Classique Larousse	-----	\$0.45
Moli�re. <i>Le Bourgeois gentilhomme</i> (Les Editions françaises) Classique Larousse	-----	\$0.45
Racine. <i>Athalie</i> (Les Editions françaises) Classique Larousse	-----	\$0.45

Le Film

(au minimum, étude d'un film par an)

Les Brûl s (ONF)**La Chanson Contemporaine et Folklorique**

(une étude choisie de plusieurs personnes mentionn s ci-dessous)

Calv�, Pierre	Leclerc, Felix
Charlebois, Robert	L�veill�e, Claude
D'Or, Georges	Mathieu, Mireille
Ferland, Jean-Pierre	S�vres, Christianne
Julien, Pauline	Vigneault, Gilles

LANGUE ET LITTERATURE 30

La Nouvelle

(au minimum, étude de dix contes ou nouvelles par an)

1. Bessette, G. <i>De Québec à St-Boniface: Récits et Nouvelles du Canada français</i> (Macmillan), 1968	\$3.95
ou	
2. Brearley, K. T. et R. B. McBride. <i>Nouvelles du Canada</i> (Prentice-Hall), 1970	\$3.95

ou

3. Brée, G. et G. Markow-Totevy. <i>Contes et Nouvelles: Revised</i> (Holt, Rinehart et Winston), 1970	\$5.45
--	--------

La Poésie

(une étude suggérée de différents genres de poésie)

Collection Deschamps. <i>Poésie, Manège d'étoiles</i> , Tome II	\$4.15
Livre du Maître	\$3.85
(Centre de Psychologie et de Pédagogie), 1969	

ou

Weber, K. L. <i>Poésie de la France et du Canada Français</i> (Longmans), 1969	\$3.75
--	--------

Le Roman

(au minimum, étude d'un roman par an)

Claudel, P. <i>L'Annonce fait à Marie</i> (Hachette Univ.) Livre de Poche	\$0.90
Fournier, A. <i>Le Grand Meaulnes</i> (Hachette Univ.) Livre de Poche	\$0.90
Leclerc, F. <i>Le fou de l'île</i> (Fides), 1970	\$1.25
Roy, G. <i>Bonheur d'occasion</i> (Beauchemin), 1965	\$4.95
St.-Exupéry. <i>Terre des hommes</i> (Hachette Univ.) Livre de Poche	\$0.90
Weyer, C. <i>Un homme se penche sur son passé</i> (Hachette Univ.) Livre de Poche	\$0.90

Le Théâtre

(au minimum étude d'une pièce par an)

Corneille. <i>Le Cid</i> (Les Editions françaises) Classique Larousse	\$0.45
Leclerc, F. <i>L'auberge des morts subites</i> . (Beauchemin), 1964	\$2.25
Molière. <i>Les femmes savantes</i> (Les Editions françaises) Classique Larousse	\$0.45
Racine. <i>Andromaque</i> (Les Editions françaises) Classique Larousse	\$0.45

Le Film

(au minimum étude d'un film par an)

La Canne à Pêche (ONF)**La Chanson Contemporaine et Folklorique**

(une étude choisie de plusieurs mentionnées ci-dessous)

Calvè, Pierre	Leclerc, Félix
Charlebois, Robert	Léveillé, Claude
D'Or, Georges	Mathieu, Mireille
Ferland, Jean-Pierre	Sèvres, Christianne
Julien, Pauline	Vigneault, Gilles

NOTE:

1. Students who complete Langue et Littérature 20, but who wish to take the matriculation examination in French 30 should not be recommended for credits in Langue et Littérature 20. The same principle applies to students who elect to take the matriculation examination in French 30 after completing Langue et Littérature 30.
2. All students wishing to use French 30 as a matriculation subject must plan to take the matriculation examination in French 30.

*En réserve au School Book Branch. On peut aussi se procurer là les autres manuels ci-dessous par commande spéciale.

MATHEMATICS

Objectives

While the different programs in mathematics have different specific objectives, the common general purposes of Senior High School mathematics courses are as follows:

1. To develop an understanding of mathematics as a creation of man and to develop an appreciation of the contribution of this discipline to the progress of civilization.
2. To develop precision in thought and expression.
3. To develop and maintain an understanding of the operations and concepts of mathematics.
4. To develop and maintain skill in mathematical operations.
5. To develop powers of logical analysis of problems and of presenting their solution in a clear and precise manner.

Mathematics 10, 20, 30, 31

This sequence of courses is designed for students in the academic pattern. The content is such that successful students may enter the university or a technical institute. These courses also contribute to general education.

MATHEMATICS 10

Recommended Texts

1. Nichols, Eugene D., Ralph T. Heimer, and E. Henry Garland. *Modern, Intermediate Algebra*. Revised edition. Holt, Rinehart and Winston of Canada Ltd., 1969.
2. Wilcox, Marie S. *Geometry, A Modern Approach*. Addison-Wesley Publishing Company, 1968.

Objectives

1. To assist the student in the reasoning, discovery, and justification of algebraic processes through basic properties.
2. To encourage students to discover mathematical truths and patterns for themselves.
3. To review the concept of proof.
4. To develop the ability to write deductive proofs.

Course Outline

The topics listed below should comprise the basic outline for Mathematics 10. The teacher should feel free to supplement these with additional topics if he so desires. Teachers should consult the curriculum guide for additional references and suggestions.

A. Extension of Real Numbers

1. Natural numbers, integers, rational numbers
2. Rational numbers and decimal numerals
3. The system of real numbers
4. Properties of addition and multiplication in the set of real numbers
5. Additional properties of the real number system: is equal to, is less than, order, density
6. Equations and inequalities
7. Absolute value.

B. Algebra

1. Exponents and radicals
2. Operations on polynomials
3. Special products, factoring
4. Solving polynomial inequalities
5. Rational expressions—simplification
6. Rational expressions in open sentences.

C. Coordinate Geometry

1. Coordinate systems: line, plane
2. Distance, midpoints of segments, slope, parallel and perpendicular lines, proofs, special forms for equations of lines.

D. Geometry

1. Definitions: space, betweenness, segment, ray, angle, bisection, midpoint, perpendicular lines, linear pair, etc.
2. Postulates—existence, congruence of triangles, etc.
3. Proof — analogy, induction, deduction, implication, truth — values of statements
4. Theorems involving: congruent segments, angles and triangles, right angles, supplements of congruent angles, vertical angles, isosceles triangles, perpendicular bisectors, addition of segments and angles, exterior angles, parallel lines, measure of the angles of a triangle, right triangles.

MATHEMATICS 13**Text**

Dean, J. E., and W. Ronald Graham. *Principles of Mathematics*. Book I. Holt, Rinehart and Winston of Canada, Ltd., 1969.

Objectives

1. To assist the student in the learning process by developing mathematical concepts through an inductive approach
2. To use applications from various areas such as mensuration, science and the real world, for the purpose of reinforcing concepts.
3. To develop powers of analyzing problems and presenting solutions in a clear manner
4. To develop and maintain an understanding of the operations and concepts of mathematics by using an essential core supplemented by exploratory topics
5. To develop and maintain skill in mathematical operations by these means.

Course Outline

The following topics indicate a suggested program of mathematics. Specific topics as they relate to chapters from a textbook are not indicated and teachers may use appropriate materials that appear to fit the interests, needs and abilities of their students. In cases where students follow the Mathematics 13, 23 sequence, attention should be given to those topics in Mathematics 13 that are prerequisite to Mathematics 23. The Curriculum Guide lists additional resource materials.

A. Descriptive Statistics

1. Definition, significance and relevance of statistics in modern society
2. Operations with significant digits and approximate numbers
3. Measures of central tendency
4. Applications

B. Geometry

1. Angles
2. Congruency
3. Similarity
4. Polygons: areas, polygonal regions
5. Parallel lines
6. Pythagorean Theorem

C. Trigonometry

1. Triangle similarity; Pythagorean Theorem
2. Angle measurement
3. Trigonometric ratios
4. Applications

D. Algebra

1. Fundamental operations—polynomials
2. Factoring
3. Fundamental operations—rational expressions
4. Exponents, scientific notation
5. Real Number Plane: Structure, graphs of linear equations, graphs of linear systems
6. Algebraic solution of linear systems
7. Relations, variation

MATHEMATICS 15**Recommended Texts:**

either

Kinney et al. *General Mathematics, A Problem Solving Approach*, Book I.
Canadian Edition. Holt, Rinehart and Winston.

or

Kinney et al. *Problem Solving Mathematics*. Holt, Rinehart and Winston.

Objectives

1. To extend the student's knowledge of mathematical operations and his ability to apply these operations.
2. To revitalize interest in mathematics through successful experiences at the student's level of understanding and through the use of novel approaches.
3. To develop an appreciation of mathematics as a living, growing and changing area of work.

Course Outline

The following topics should be considered as a suggested list only. **Teachers should feel free to modify the program to suit the needs and interests of their students.** Such modification may include the deletion and/or addition of certain topics. In cases where students will follow the Mathematics 15, 25 sequence, attention should be given to those topics of Mathematics 15 which are considered as desirable preparation for Mathematics 25. Not all topics listed are treated in the recommended text. Teachers should consult the Curriculum Guide for resource materials.

A. Numeration Systems

B. Basic Algebra

1. Natural numbers, integers, fractions and rational numbers
2. Ratio and proportion
3. Equations
4. Problem solving through equations

C. Geometry

1. Measurement
2. Similarity
3. Congruence

D. Probability

E. Business Mathematics

1. Interest
2. Commission
3. Profit and loss
4. Banking services
5. Insurance
6. Payroll

F. Statistics—presentation and interpretation of data.

MATHEMATICS 20

Recommended Texts

1. Nichols, Eugene D., Ralph T. Heimer, and E. Henry Garland. *Modern Intermediate Algebra*. Revised edition. Holt, Rinehart and Winston of Canada, Ltd., 1969.
2. Wilcox, Marie S. *Geometry, A Modern Approach*. Addison-Wesley Publishing Company, 1968.

Objectives

1. To extend the students' understanding of algebraic processes
2. To develop understanding and skill in the use of relations, and linear, quadratic, exponential and logarithmic functions
3. To encourage students to discover mathematical truths and patterns for themselves
4. To extend geometrical concepts to include circles, polygons, proportion and space geometry.

Course Outline

The topics listed below should comprise the minimum course for Mathematics 20. Teachers should consult the Curriculum Guide for teaching suggestions and a list of teacher references.

I. Algebra

- A. Relations and Functions:** Functional notation, composition of functions, inverse relations and functions, proportion.
- B. Quadratic Functions:** The general quadratic function, completing the square, applications.

- C. **Quadratic Equations and Inequalities:** Quadratic formula, properties of roots, fractional and radical equations, quadratic inequalities.
- D. **Complex Number System:** Properties of the complex numbers; quadratic equations with complex solutions.
- E. **Solution Sets of Systems:** Independent, inconsistent and dependent systems, comparison, substitution and addition methods of solving systems of equations.
- F. **Logarithmic Functions:** Scientific notation, approximating products, quotients, powers and roots, exponential equations, change of base.

II. Geometry

- A. **Quadrilaterals:** Parallelograms, Right Triangle Theorem, Triangle Inequalities.
- B. **Space Geometry:** Lines and planes in space, perpendicularity and parallelism in lines and planes, distance in space, dihedral angles.
- C. **Ratio, Proportion, Similarity:** Proportionality, proportional segments, similar triangles, square root, geometric mean, Pythagorean Theorem.
- D. **Circles and Spheres:** Tangents, chords, arcs, secants.

MATHEMATICS 23

Text

Dean, J. E., and W. Ronald Graham. *Principles of Mathematics*, Book II. Holt, Rinehart and Winston of Canada, Ltd., 1969.

Objectives

1. To assist the student in the learning process by developing mathematical concepts through an inductive approach
2. To use applications from various areas such as mensuration, science and the real world, for the purpose of reinforcing concepts
3. To develop powers of analyzing problems and presenting solutions in a clear manner
4. To develop and maintain an understanding of the operations and concepts of mathematics by using an essential core supplemented by exploratory topics
5. To develop and maintain skill in mathematical operations by these means.

Course Outline

The following general topics indicate the program in Mathematics. See the Curriculum Guide for additional useful materials.

A. Algebra

1. The set of real numbers
2. Exponents, radicals, logarithms
3. The slide rule
4. Quadratic equations
5. Equation systems: Inequalities, linear programming
6. Applications

B. Geometry

1. Nomenclature and relationships of the circle

C. Trigonometry

1. Six basic trigonometric functions
2. Trigonometric functions of special and quadrantal angles
3. Graphs
4. Applications

D. Probability**MATHEMATICS 25****Recommended Text**

Kinney et al. *General Mathematics, A Problem Solving Approach*, Book 2.
Canadian edition. Holt, Rinehart and Winston.

Objectives

1. To extend the student's knowledge of mathematical operations and his ability to apply these operations.
2. To revitalize interest in mathematics through successful experiences at the student's level of understanding and through the use of novel approaches.
3. To develop an appreciation of mathematics as a living, growing and changing area of work.

Course Outline

The following topics should be considered as a suggested list only. Teachers should feel free to modify the program to suit the needs and interests of their students. Such modification may include the deletion and/or addition of certain topics. Not all topics listed are treated in the recommended text.

A. Basic Algebra

1. Equations (two variables)
2. Graphs (two variables)
3. Square roots (tables)
4. Problem solving
5. Exponents

B. Geometry and Trigonometry

1. Symmetry
2. Right triangle and Pythagorean relation
3. Space
4. Trigonometric ratios

C. Management of Personal Property

1. Stocks, bonds and investments
2. Automobile
3. Real Estate
4. Taxation
5. Consumer Credit

D. Application of mathematics principles to

1. Construction
2. Sheet Metal
3. Electricity
4. Food Preparation
5. Machine Shop

MATHEMATICS 30**Recommended Texts**

Nichols, Eugene D., Ralph T. Heimer, and E. Henry Garland. *Modern Intermediate Algebra*. Revised edition. Toronto: Holt, Rinehart and Winston of Canada Ltd., 1969.

Vance, Elbridge P., Booklet: *Mathematical Induction-Conic Sections*. Don Mills, Ontario, Addison-Wesley Publishing Company, 1971.

Teachers' References

1. Elliott, H. A., K. D. Fryer, J. C. Gardner, N. J. Hill. *Algebraic Structures and Probability*. Toronto: Holt, Rinehart and Winston of Canada Ltd., 1966.
2. Elliott, H. A., K. D. Fryer, J. C. Gardner, N. J. Hill. *Functions, Relations, and Transformations*. Toronto: Holt, Rinehart and Winston of Canada Ltd., 1966.
3. Vance, Elbridge P., *An Introduction to Modern Mathematics*, Second Edition, Don Mills, Ontario: Addison-Wesley Publishing Co. 1968.

Course Outline

The topics listed below comprise the basic outline for Mathematics 30. The teacher should feel free to use supplementary materials to aid in the teaching of these topics and should consult the curriculum guide for additional references.

1. Trigonometric Functions and their Applications
2. Vectors
3. Sequences, Series and Limits
4. Binomial Theorem
5. Permutations and Combinations
6. Probability Functions
7. Polynominal Functions
8. Conic Sections
9. Mathematical Induction

MATHEMATICS 31

NOTE: Mathematics 31 is made up of two parts—(1) Calculus AND (2) Vectors and Matrices.

Calculus**Text**

Elliott, H. A., K. D. Fryer, J. C. Gardner and H. J. Hill. *Calculus*. Holt, Rinehart and Winston, Inc.

Teachers' References

Elliott et al. *Solutions for Calculus*.

Lang, S. *Calculus*. Addison-Wesley.

Course Content

1. Slopes and Tangents	(Chapter 1)
2. Distance, Velocity and Acceleration	(Chapter 2)
3. Maxima and Minima	(Chapter 3)
4. Sequences, Limits and Derivatives	(Chapter 4)
5. Derivatives of Functions	(Chapter 5)
6. Tangents, Derivatives and Graphs	(Chapter 6)
7. Further Applications of Derivatives	(Chapter 7)
8. Solutions of $Dy=f(x)$	(Chapter 8)
9. Areas	(Chapter 9)

Vectors and Matrices**Text:**

either

Elliott, H. A., et al. *Vectors and Matrices*. Holt, Rinehart and Winston, 1967.

or

Elliott, H. A., et al. *Vectors and Algebraic Structures*. Holt, Rinehart and Winston, Inc., 1973.

Teachers' References

Elliott et al. *Solutions to Vectors and Matrices*.

Davies, Philip J. *The Mathematics of Matrices*. Blaisdell Publishing Company, 1965.

Course Content

1. Vectors	(Chapter 1)
2. Algebraic Vectors	(Chapter 2)
3. Length and Inner Product	(Chapter 3)
4. Systems of Linear Equations	(Chapter 6)
5. Matrices and Linear Transformations (optional)	(Chapter 7 of 1967 ed.)

MATHEMATICS 33

Text

Dean, J. E., C. F. Hutchinson, and G. E. Moore. *Principles of Mathematics*, Book III. Holt, Rinehart and Winston of Canada, Ltd., 1970.

Objectives

1. To assist the student in the learning process by developing mathematical concepts through an inductive approach
2. To use applications from various areas such as mensuration, science and the real world, for the purpose of reinforcing concepts
3. To develop powers of analyzing problems and presenting solutions in a clear manner
4. To develop and maintain an understanding of the operations and concepts of mathematics by using an essential core supplemented by exploratory topics
5. To develop and maintain skill in mathematical operations by these means.

Course Outline

A. Algebra

1. Relations and Functions
2. Quadratic Functions
3. Maximum and Minimum values of quadratic functions
4. Variation
5. Exponential and Logarithmic Functions
6. Inverse functions
7. Permutations and Combinations
8. Binomial Theorem

B. Trigonometry

1. Sine Law and Cosine Law
2. Pythagorean relations and trigonometric equations
3. Vectors
4. Using trigonometry to solve vector problems

C. Elementary Descriptive Statistics

1. Frequency distribution tables, frequency histograms, frequency polygons
2. Quartiles and percentiles
3. Measures of variability
4. Standard Measure
5. Binomial Distribution
6. Curve of normal distribution

MUSIC

Objectives of the Secondary School Music Program

To help the student:

1. Increase his awareness of and sensitivity to music of his own and other cultures, past and present.
2. Increase his ability to understand, evaluate and become articulate about music.
3. Understand the ways and means of communicating through music.
4. Increase his ability to communicate through music.
5. Evaluate his own musical abilities.
6. Be a part of and understand the creative experience.
7. Become aware of the basic importance of music in his life and in the lives of men.
8. Increase his self-confidence.
9. Develop a philosophy of life by providing an acquaintance with musical works which convey universal truths.

The Secondary School Music Program

Grade VII, VIII and IX music courses are defined as Group A options in the Junior High School Handbook. The time allotment for these options ranges from 120 to 175 minutes per week.

The Senior High School music program may be organized under the following headings: Music 10, 20, 30 (choral music); Music 11, 21, 31 (instrumental music); Music 12 (general music).

Where staff, facilities and enrollment permit, the students should be given the opportunity to choose from among Choral Music, General Music, or Instrumental Music as a means of satisfying the music option at each grade level in the Junior High School. Where course offerings must be limited, the interests and strengths of the students and staff should determine which alternatives will be offered. All music courses, therefore, should include the basic core of conceptual learnings in music as part of the course content as indicated below. The teacher should endeavor to help each student progress at least one level of understanding in each musical concept each year.

Guidelines for credit values and sequences of courses at the High School level are found in the Senior High School Handbook.

At the Junior High School level instruction should be individualized so that the students will not be prohibited from taking any of these music courses because they had not elected music the previous year. This could be achieved by having all the first year band or orchestra students in the same class even though some may be in Grade VII and some in Grade VIII, or by giving separate evaluations to the Grade VIII students who had taken music in Grade VII and those students who had not taken music in Grade VII.

Planning a Program

An effective program will take into account the backgrounds, interests, strengths, and limitations of the students in that program. Each instructor must, therefore, determine the present level of achievement of his students; the goal for which the students should strive; the means of accomplishing the objectives and of evaluating the success of the program.

The Scope and Sequence Chart of the Conceptual Learnings included here is not intended to be prescriptive. It is a "bird's-eye view" of the elements included in a secondary music program of studies and suggested sequence presentation. For the most satisfactory progress towards the long range objectives, a balanced program should be planned for each student. The balance that should be the concern of the teacher is the balance of conceptual learnings and not one of activities. For example, a high degree of rhythmic development (see chart) with a complete neglect of harmonic or historical understanding, would signify

an unbalanced program. Yet if an understanding of all of the concepts can be developed through choral rehearsals, performance and discussions about choral music, additional activities will not be necessary. It is possible for the same understanding to be achieved in a strictly instrumental program. Usually some variety of activities is necessary to allow for individual differences within any class.

SCOPE AND SEQUENCE CHART

(Summary only — details are included in Curriculum Guide to Secondary Music)

Elements of Music

Rhythm	— six levels ranging from aural awareness of and response to phrasing, pulse, rhythm and accent to development of understandings of such concepts as syncopation.
Melody	— six levels ranging from aural awareness of pitch to an understanding of descants, rounds and canons.
Harmony	— six levels ranging from aural awareness of chord changes to an introduction to two- and three-part harmonization.
Form	— six levels ranging from aural awareness of phrase length and a feeling for cadence to such forms as sonata, fugue etc.
Tempo	— six levels ranging from aural awareness and response to changes in tempo to visual awareness of the relationship of tempo to form.
Dynamics	— six levels ranging from aural awareness of loud and soft to ways of achieving and controlling dynamics.
Tone Color	— six levels ranging from aural awareness of difference in timbre, to a knowledge of instrumental effects.

Historical Perspectives

Music Yesterday	— six levels ranging from singing as amplified speech in primitive times to 'avant garde' music.
Music Today	— six levels ranging from music in today's cultures and sub-cultures to concerns of professional musicians etc.

Related Areas

Science of Sound	— six levels ranging from aural awareness of how sounds are produced to consonance and dissonance in acoustics.
Compositional Techniques	— six levels ranging from awareness of relationship of inspiration to technique, to opportunities to write music from a given progression.
Musical Score	— six levels ranging from awareness of single line scores to full orchestral and vocal scores.
Aesthetic Consideration	— six levels ranging from awareness of three-way relationship among composer-performer and listener to an analysis of the concept of changing music styles.

In order to place this information on a chart, the statements have been summarized. These statements are explained fully in the Curriculum Guide for Secondary Music.

The Basic Core

To achieve the objectives of the music program three areas must be the concern of the teacher: the cognitive, the psychomotor and the affective. These three areas should not be separated but be considered simultaneously.

In the same way the cognitive, psychomotor and affective remain of equal concern, the various sections of the Scope and Sequence Chart of Conceptual Learnings should be considered and planned-for concurrently. None of the areas should be neglected for any appreciable period of time.

The chart is divided into three sections: Elements of Music (rhythm, melody, harmony, form, tempo, dynamics, tone color); Historical Perspectives; and Related Areas (science of sound, compositional techniques, texture, and aesthetic considerations). For each element or area several levels of development are outlined which range from simple awareness to aural and visual understanding. These levels of development do not necessarily represent grades, but are to be used to develop a balanced spiral program throughout the secondary school. It should be noted again, the chart is not meant to be prescriptive, and above all, it should not be restrictive. Classes or students able to achieve at a higher level should be encouraged to do so, but only if all areas are progressing and expressive skills and positive attitudes developing. Performance groups will probably progress more rapidly in rhythm, melody, dynamics, etc., and General Music students in historical perspectives or compositional considerations.

At all times the teacher must be aware that music is more than the sum of its parts, and that one element can not satisfactorily be separated from the others. In spite of this, the distinctive attributes which make each musical element or area different from the others have been recognized and isolated in the chart.

The Secondary Choral Program

In addition to covering the basic core, the choral program should help the student:

1. Develop tone control and avoid the misuse of his singing voice.
2. Become acquainted with a varied repertoire of choral literature.
3. Improve his breathing, diction and ability to sing parts.
4. Improve his ability to read music.

Grades VII to X — General Music Program

Students choosing general music expect a varied and exciting musical experience that is different from the Choral program, and yet not a repeat of the elementary music program. The emphasis may be on creating music, performing music on instruments, and singing, or any subject or skill area of interest to the students and teacher. This in no way relieves the class of the responsibility of including the basic core of musical understanding.

The Secondary Instrumental Program

In addition to covering the basic core, the instrumental program should help the student:

1. Develop tone control and articulation skills necessary for performing in various styles.
2. Become acquainted with a varied repertoire of instrumental music literature, both solo and ensemble.
3. Develop personal character traits of leadership, poise, and dependability.
4. Improve his ability to read music.

Recommended Textbooks

The following music texts are recommended for use commencing September, 1971:

Choral Music (Junior High)

Leonhard, Charles, et al. *Discovering Music Together*, Books 7 and 8, Follett, 1967.
 Wilson, Harry, et al. *Growing With Music*, Books 7 and 8. Prentice-Hall, 1966.
 Cowan, Don. *Search for a New Sound*, Basic Goals in Music, Book 8. McGraw-Hill, 1967.

General Music (Junior High and Music 12)

Landis, Beth, and Lara Hoggard. *Exploring Music*, the Senior Book. Holt, Rinehart and Winston, 1968.

OCCUPATIONS 10

References

Clarke and Woodsworth. *Youth and the Modern World of Work. Job Monographs and Occupational Outlines.*

Objectives

1. To relate satisfactory work habits formed in school to possible success on the job.
2. To focus attention on the importance of desirable attitudes toward the world of work.
3. To encourage an awareness by the student of the changing nature of employment and its possible relationship to him.
4. To encourage each student to select a vocational area related to his abilities and interest.
5. To provide an opportunity for group guidance in the classroom.

Course Content

Unit I.—Adequate Preparation

A.—Educational and vocational planning

1. Types of planning.
2. Significance of course choice.

B.—The importance of an education

1. The cost of quitting school.
2. The reasons people drop out of school.
3. The experiences the drop-out encounters.
4. What the high school graduate brings to employment.

Unit II.—Occupational Exploration

A.—Occupations ahead

1. Survey of the occupational field.
2. The Canadian occupational picture.

B.—Classifications of occupations

1. Dominion Bureau of Statistics Classification.
2. Other classifications.
3. Demand occupations.

C.—Investigation of a particular occupation

1. Need for occupational surveys.
2. Basic outline for the study of an occupation.

D.—Investigation of an industry

1. Influence of the industrial picture on career planning.
2. Adaptability essential in industrial change.

Unit III.—Opportunities for Training

A.—Kinds of training

1. University.
2. Institutes of Technology.
3. Vocational Programs.
4. Apprenticeship.
5. Agricultural and Vocational Colleges
6. Business Colleges.
7. Schools of Nursing.

B.—Financial assistance for training

1. Students Assistance Act.
2. Scholarships.
3. Armed Services.
4. Subsidized Apprenticeship.
5. Allowances.

Unit IV.—The Individual and the Job

A.—Analysis of interests and abilities

1. Interest and the job.
2. Abilities and the job.

B.—Relationship of social and emotional characteristics to the job

1. Social characteristics.
2. Personal characteristics and the job.

C.—Safety and the individual

1. The accident problem.
2. The cost of accidents.
3. Accident prevention responsibility.
4. Cause of accidents.
5. The role of training in accident prevention.
6. Preventive program.

D.—Alcohol and the job

1. Historical background.
2. Reasons for drinking.
3. Effects in industry and the professions.
4. Effects upon individuals.
5. Rehabilitation

PHYSICAL EDUCATION

Physical education is concerned with development of the whole individual. As well as contributing to the mental, social and emotional well-being of youth, a claim all subjects make, physical education has its unique contribution in developing physical fitness and motor skills in recreational activities which can carry over into adult life.

Every physical education program must motivate the student to engage in activities which develop physical fitness as well as those that are recreational in nature. The program must be challenging and also allow for personal achievement at the various levels of participation. Individual differences, needs and desires must be taken into account in order to provide enjoyment and self-satisfaction.

Objectives of Physical Education

1. The development of a strong body and sound functioning of body systems.
2. The development of recreational and utilitarian skills.
3. The development of a wholesome interest in physical activities for wise and constructive use of leisure time.
4. The development of desirable standards of behaviour and the ability to get along well with other people.

PROGRAM ORGANIZATION

There are many activities from which a physical education program may be chosen. In order to insure that a well-balanced program is carried out, however, three principles have been established.

First, the program from Grade VII through Grade X is sequential and there should be a continuous progression in skills from basic to complex. The student should also experience a variety of activities. Therefore the program should be carefully planned with this end in view. It is particularly important that the program in Senior High School be planned with a knowledge of what the student's program has been in the Junior High School.

Second, six major kinds of activities are considered to be of importance in the physical education program. These are designated as core activities. Each of the six categories of activity either is in itself a core activity or includes core activities. The core activities are:

1. Outdoor: Flag Football, Ice Hockey, Softball, Soccer, Field Hockey.
2. Indoor: Basketball, Volleyball.
3. Dual and Individual: Badminton, Cross-Country Running, Handball, Skating, Track and Field, Wrestling (boys).
4. Rhythemics and Dance.
5. Tumbling and Gymnastics.
6. Aquatics (where facilities are available).

Applying the principles stated above, therefore, a sound physical education program for any one year will be organized as follows:

1. Two or more outdoor team games at least one of which must be a core activity.
2. Two or more indoor team games at least one of which must be a core activity.
3. Two or more individual or dual sports one of which must be a core activity.
4. Tumbling and Gymnastics.
5. Rhythmnics and Dance.
6. Aquatics (where facilities are available).

PHYSICAL EDUCATION 10

Course Content

NOTE: In teaching the activities listed below the following areas will be covered:

(1) History, (2) Terminology, (3) Rules and Officiating, (4) Selection and Care of Equipment, (5) Skills and Techniques, (6) Team Play or Games strategy (where applicable), (7) Lead Up Games and Games Variations, (8) Conditioning. Some of these areas will be incidentally taught while other will be taught directly.

Activities not included in the list may be taught with the approval of the superintendent of schools.

OUTDOOR TEAM GAMES

A.—Flag Football (Corc)

1. Skills and Techniques

- (a) Stance of linemen and backfield.
- (b) Pulling of linemen.
- (c) Blocking — shoulder, brush, kick-off protection, pass protection.
- (d) Passing and receiving — throwing, catching, cutting, pass patterns, pass defence.
- (e) Central exchanges — the "T", single wing, punting, field goals, leading.
- (f) Kicking and receiving — punting, field goals, receiving a punt or a kick-off.

2. Team Play

- (a) Offensive Plays — quick opening, off tackle, end run, reverse and double reverse, counter, pass plays.
- (b) Defensive Plays — individual responsibilities, side-line defence, rushing, rotating, stunting, looping, floating.

B.—Ice Hockey (Core)

1. Skills and Techniques

- (a) Skating — starts, stops, backwards, forwards, turns, reverses.
- (b) Shooting — forehand, backhand, slap.
- (c) Passing.
- (d) Checking — poke, shoulder, hip, fore, back, blocking shots.
- (e) Goal tending.

2. Team Play

Power play, penalty killing, offensive and defensive positional plays, plays initiated inside the blue line.

C.—Softball (Core)

1. Skills and Techniques

- (a) Throwing — underhand, overhand, sidearm.
- (b) Fielding — ground balls, fly balls.
- (c) Batting — stance, saving, punting.
- (d) Base running.
- (e) Positional Play — catcher, pitcher, basemen, shortstop, outfielders.

2. Team Play

- (a) At Bat.
- (b) In the Field.

D.—Soccer (Core)

Skills and Techniques

- (a) Passing, receiving, dribbling, heading.
- (b) Trapping — foot, shin, body.
- (c) Kicking (stationary and moving) — volleying, charging, tackling, throwing, goalkeeping.

E.—Bordenball

Skills and Techniques—passing, shooting.

F.—Broomball

Skills and Techniques—basic skating skills, goal tending, use of broom.

G.—Curling

Skills and Techniques

Delivery (in-turn, out-turn, weight); sweeping, skipping.

H.—English Rugby

Skills and Techniques

- (a) Running — swerve, sidestep, change of pace, hand-off, selling.
- (b) Ball Skills — passing, punting, catching, drop kicking, place kicking, dribbling, falling the ball.
- (c) Fielding and tackling.
- (d) Scrum Play — set scrum, loose scrum, line out, wheeling, positional play.
- (e) Back Play — alignment, scrum half, break through, offensive kicking (short kick, grubber kick, cross kick), reverse play, scissors pass, blind side pass.

I.—Field Ball

Passing, Shooting.

J.—Field Hockey (Core)

Skills and Techniques

- (a) Passing, receiving, dribbling, fielding, tackling.
- (b) Individual defence, bully, corner, roll-in.
- (c) Goal tending.

K.—Speedball

Skills and Techniques

Dribbling, passing, place and drop kicking, punting, pickups.

INDOOR TEAM GAMES

A.—Basketball (Core)

1. Skills and Techniques

- (a) Basic Stance — offence and defence.
- (b) Footwork — running forward and backward, pivoting, one-two count.
- (c) Passing, Pass-Receiving — two-hand chest, one-hand push, bounce, overhead, hook, baseball, underhand.
- (d) Shooting — two-hand set, layup, hook, jump, running one hand, foul shooting.
- (e) Dribbling — high, low.

2. Team Play

- (a) Man-to-man and zone defences.
- (b) Screening, overloading, fast break.

B.—Volleyball (Core)

1. Skills and Techniques

- (a) Volleying — position, back court volleying, setting, below the chest.
- (b) Serving — underhand, overhand, assisted, arm and hand action.
- (c) Spiking — approach, placing, back court spiking, arm and hand action.
- (d) Blocking — the jump, recovering the ball off the net.

2. Team Play

- (a) Offence — 1, 2, 3 (volley, set, spike), rotation of the setter, the fake spike.
- (b) Defence — double team blocking, team movement for spikes and tips, team movement when there is no spike.

C.—Floor Hockey

With the exception of skating, same skills as ice hockey.

D.—European Handball

Skills and Techniques

Dribbling, shooting, passing, defensive fundamentals.

DUAL AND INDIVIDUAL SPORTS

A.—**Badminton** (Core)

Skills and Techniques

- (a) Serves.
- (b) Forehand and backhand.
- (c) Clear, drive, drop, smash, net, round the head.
- (d) Doubles systems of play.

B.—**Cross Country Running** (Core)

Running style, conditioning, pacing, strategy.

C.—**Handball** (Core)

Skills and Techniques

Serve, volley, half-volley, lob, killshots, back-wall and ceiling shots, doubles systems of play.

D.—**Skating** (Core)

Skills and Techniques

Skating forward, backward; stops, turns, starts; figure 3; figure 8, spiral; elementary individual and pair routines.

E.—**Track and Field** (Core)

Skills and Techniques

- (a) Sprints—starts, running stride, the finish.
- (b) Relays—baton exchange, types of relay.
- (c) Middle Distance—running stride, hand, arm, leg and foot action, the finish.
- (d) Broad Jump—approach, take-off, the jump, landing.
- (e) High Jump—approach, take-off, kick (western, eastern, belly roll), landing.
- (f) Hurdles—movement of leading and trailing leg, steps between hurdles, the start, approaching first hurdle, the finish.
- (g) Shot Put—hand-hold, delivery, release, movement across the circle, recovery.
- (h) Discuss—hand-hold, initial stance, preliminary swings, delivery, movements across the circle, release, recovery.
- (i) Pole Vault—hand-hold, pole carry, approach, swing up, pull up, body form, landing.
- (j) Hop, Step and Jump — approach, take-off, the hop-step-jump rhythm, landing.

F.—**Wrestling** (Core)

Skills and Techniques

- (a) Stance—on the feet, on the mat, closed stance.
- (b) Breakdowns—near arm and far ankle, head lever and far ankle, far arm and far ankle.
- (c) Riding the opponent.

- (d) Reverses and Escapes—defensive positions on the mat, wing lock or side roll, escape from underneath, hip-lock escape, hip-lock escape with cross face.
- (e) Pinning Holds—near wrist and half-nelson, hammerlock and half-nelson, crotch and half-nelson, outside crotch and near wristlock.

G.—Archery

Skills and Techniques

Stringing the bow, basic stance and position, nocking, holding, drawing and aiming, loosing, novelty shots.

H.—Bowling

Skills and Techniques

Grip, footwork, release, speed and rhythm, point of aim.

Types of Delivery—straight, hook, back up.

Types of Shots—strikes, spares, splits.

I.—Golf

Skills and Techniques

Grips, stance, swing, wood shots, irons, putting, selection of clubs.

J.—Hiking and Campcraft

1. Skills and Techniques

- (a) Campcraft:—fire building and safety, outdoor cooking, menu planning, cooking kits and food packing.
- (b) Knotcraft:—rope whipping, reef knot, bowline, clove hitch, use of knots, use of lashing ropes.
- (c) Direction finding:—sun, watch, stars, compass.

2. Campsite and Equipment

- (a) Types of camp:—resident family, dual and individual campsites and shelters.
- (b) Camp facilities and resources, public lands and parks.

3. Camping Activities

- (a) Campfire activities:—stories, skits, songs, games.
- (b) Other:—canoeing, swimming, casting, fishing, archery, hiking, ice-fishing.
- (c) Nature study:—birds, leaves, rocks, insects, trees, animals, fish.

K.—Horseshoes

Skills and Techniques

Grip, turns, stance, step and swing release.

L.—Personal Defence

Judo, ju-jitsu, boxing.

NOTE: These sports should be offered only by teachers skilled in the activity and where facilities and equipment ensure the safety of the students participating.

M.—Skiing

Skills and Techniques

- (a) On the level:—gliding, step, skating, step turn, kick turn.
- (b) Climbing:—side step, herring bone, traverse.
- (c) Downhill:—straight turn, traverse stopping, side slipping, other turns.

N.—Table Tennis

Skills and Techniques

- (a) Basic stance, grip, service, spins.
- (b) Defensive strokes:—the half volley, the chop.
- (c) Offensive strokes:—the drive, the drop shot.
- (d) Doubles systems of play.

O.—Tennis

Skills and Techniques

Grip, stance, footwork, forehand and backhand drives, service, lob, volley, half volley, smash, doubles systems of play.

RHYTHMICS AND DANCE (Core)

A.—Dance

1. **Folk Dance:**—basic steps, fundamental and derived.
2. **Square Dance:**—patter and singing calls, single and double visiting couple, accumulative figures.
3. **Social and Ballroom Dance:**—basic steps in waltz, foxtrot, tango, rumba, samba, current dance steps, dance patterns.
4. **Creative or Modern Dance:**
 - (a) Moving in and through space:—locomotor and axial movement, space design, group design, floor pattern, qualities of movement.
 - (b) Dance techniques:—creative activities, improvisations, abstracts, response to stimuli.
 - (c) Composition principles:—units, variety, repetition, contrast, balance, harmony.
5. **Tap Dance:**—basic steps, combinations, routines.
6. **Ballet.**

TUMBLING AND GYMNASTICS (Core)

A.—Tumbling

Forward roll, backward roll, shoulder roll, dive roll, three-man shuffle, double roll, jump through, nip up, chest roll, fish flop, head spring, neck spring, hand spring (bent and straight arm), round off cartwheel.

Trampoline

- (a) Rebounding form—basic form, tuck, pike, jackknife.
- (b) Drops—check drop, knee, hand and knee, seat, front and back.
- (c) Advanced stunts—somersaults, twists, dives and back over.

B.—Free Exercise

C.—Balances

Squat, hand and head, forearm, snapdown.

D.—Double Balances

Foot to hand, thigh stand, knee stand, walk-up shoulder mount, low arm to arm, assisted somersault.

E.—Pyramid Building

F. Horizontal Bar (Boys)

Chins, skin-the-cat, monkey hangs, belly grind, front hip circle, short underswing and dismount, low underswing with half turns at end, single knee dismount, single knee mount from swing, single knee circle backward, double knee circle forward, single knee circle forward.

G.—Vaulting Box

1. Sideways:—squat vault mount, jump off forward (with pike), straddle vault, squat vault, side or flank vault, front vault, stoop vault, dive over box with forward roll, neckspring, headspring, handspring.
2. Lengthways (boys)—squat vault mount, kneeling vault, straddle vault mount, side vault, scissors vault with half turn, forward roll, neckspring headspring, handspring.

H.—Parallel Bars (Boys)

1. Mounts:—single leg cut on, double leg cut on, lazy man kip, inverted hang to straddle.
2. Dismounts:—single leg cut off, double leg cut off, front dismount to side, rear dismount to side.
3. Stunts:—jump to cross rest position, jump to cross upper hang, swing from shoulders, stationary and swinging dips, hand walk forward, crab walk on bars, straddle progression, swing through and sit, forward roll to straddle, forward roll, shoulder balance, roll forward from shoulder, roll backward from straddle, kick up-start, front uprise, back uprise, upper arm kip, handstand.

I.—Uneven Parallels (Girls)

1. Mount:—front support mount, backpull over, hang to straddle, pike or swing legs over, knee circle mount.
2. Dismount:—handstand $\frac{1}{4}$ turn, underswing high bar, straddle sole-circle.
3. Movements on the bars:—
 - (a) Hanging and swinging—underswing high bar $\frac{1}{4}$ turn, skin-the-cat cartwheel, cast off high bar.
 - (b) Circling the bar—knee circle, hip circle, seat circle.
 - (c) From bar to bar—stem rise, single leg kick-over, eagle regrasp.

J.—Rings (Boys)

Chins or bent-arm hang, inverted hand, swing, basket, single leg cut, inlocate, dislocate.

K.—Balance Beam (Girls)

1. Mounts:—straddle over to sit, squat mount, fence vault.
2. Dismounts:—pike jump, English hand balance, cartwheel.
3. Locomotor movements:—runs, hops, jumps.
4. Balances:—front scale, knee scale, lunge.
5. Tumbling stunts:—front roll, back roll.

AQUATICS (Core)

A.—Swimming

1. Adjustment to the water, drownproof techniques.
2. Strokes—front crawl, back crawl, elementary back stroke, side stroke, breast stroke, hybrid strokes.
3. Floating, treading water and sculling.
4. Diving.
5. Life saving (for advanced swimmers).
6. Water games.

B.—Synchronized Swimming

1. Sculling—flat scull, head first, feet first, circle propeller.
2. Back entries—back tuck somersault, back dolphin, kip, flying back dolphin.
3. Forward entries—front tuck somersault, front pike, somersault, bent knee front, tuck somersault, porpoise.
4. Ballet leg figures.
5. Strokes.
6. Floating—back layout, tub, log roll, marlin, waterwheel, shark.
7. Individual and group routines and patterns to music.

C.—Water Safety

PHYSICAL EDUCATION 20

The general objectives of physical education will remain the same for Physical Education 20 as for all other physical education programs: that is the program should provide for the attainment of physical, social, emotional, and intellectual objectives. Opportunity should be provided for the development of strength, agility, speed, vitality, and general physical fitness, as well as participation in, and the enjoyment of, a variety of physical activities. In addition, through certain activities it is possible to create an atmosphere of cooperation and fair play and to develop self-expression, poise, and creativity.

It is desirable for all students to take Physical Education 20 and it should be available to all students, regardless of program.

Specific objectives for any particular Physical Education 20 program should reflect the specific interests, needs, and abilities of the student group. Any given program might emphasize one or more of the following plans:

- (1) Continue a basic sequential program initiated at the Grade Seven level.

As more students are encouraged to take Physical Education 20, the greater is the need for a coordinated program through Physical Education 10 and 20. Physical Education 20 should not be merely a duplication of Physical Education 10.

(2) Stress individual and dual sports. When adjusting the program to meet the needs of a student group approaching graduation, an increased stress on leisure-time activities with definite carry-over value should be made. With the ever increasing need for instruction in the wise use of leisure time such a program is vital, including such activities as tennis, badminton, swimming, camping, boating, and curling, as well as the promotion of co-educational activities.

(3) Develop student leadership techniques. Physical Education 20 students should provide leadership in the intramural and class programs within the school, and ideally, be prepared to serve the community.

A combination of these various approaches will in all probability best serve the needs and interests of most physical education classes and in so doing present a challenging, enjoyable, and balanced program.

PHYSICAL EDUCATION 30

The program for Physical Education 30 should be designed with emphasis upon individual and dual sports. It should concentrate on those activities that can be enjoyed throughout life stressing purposeful use of one's leisure time.

The activities which are taught will depend upon the facilities and equipment available, however utilization of facilities outside the school will provide for curriculum enrichment.

Core: Outdoor Education Fitness, First Aid.

Electives. A minimum of four should be chosen from the following list. Archery, aquatics, badminton, bowling, curling, dance, fencing, golf, gymnastics, handball, judo, orienteering, (figure) skating, skiing, tennis, track and field, other individual or dual sports and leadership and organization experiences.

PSYCHOLOGY 20

(Based on Sorenson and Malm. *Psychology For Living.*)

The objective of this course is not primarily the mastery of a given body of subject matter. Rather, its purpose is to bring to the student's attention a scientific approach to the study of human behavior so that he may appreciate more fully the reasons that underlie his own acts and those of his fellows.

Compulsory Units

Unit 1—Personality

Unit 2—Mental and Emotional Health

Optional Units (Three out of five to be chosen)

Unit 3—Physical Growth and Behavior

Unit 4—Effective Learning

Unit 5—Intelligence and Thinking

Unit 6—Courtship and Marriage

Unit 7—Planning a Career

Text

Sorenson and Malm. *Psychology For Living.*

Course Content

Introduction to the Course

- (a) A Definition of Psychology
- (b) A Brief History of Psychology
- (c) The Methods of Psychology
- (d) Other Fields of Study in Which There Is a Similarity Either of Name or of Subject Matter

COMPULSORY UNITS

Unit 1—Personality

Objective

The objective of this unit is to develop in the student an understanding of the concept of personality.

Course Content

- (a) Sources and Growth of Personality
- (b) Getting Along with Other People
- (c) Habits
- (d) Needs

Unit 2—Mental and Emotional Health

Objective

The objective of this unit is to develop in the student an understanding of the implications of mental and emotional health on human behavior.

Course Content

- (a) Emotion
- (b) Methods of Defence and Escape
- (c) Feelings, Concepts, and Attitudes
- (d) Anger and Fear

OPTIONAL UNITS

Unit 3—Physical Growth and Behavior

Objectives

The objective of this unit is to develop an understanding of the physical bases of behavior.

- (a) Structures for Objective Awareness and Response
- (b) Physical Growth
- (c) The Effect of Physical Development on Personality

Unit 4—Effective Learning (Chapters 15 - 18, *Sorenson and Malm*)

Objective

The objective of this unit is to develop an understanding of the learning process and the psychological principles underlying effective study habits.

- (a) Success in School and as an Adult
- (b) How to Study
- (c) How we Learn
- (d) Memory

Unit 5—Intelligence and Thinking (Chapters 19 - 21)

Objective

The objective of this unit is to develop in the student an understanding of the nature of intelligence and its relationship to thinking.

- (a) Definitions of Intelligence
- (b) The Distribution of Human Intelligence
- (c) Intelligence and Levels of Thought
- (d) Cultivation of Clear Thinking

Unit 6—Courtship and Marriage

Objective

The objective of this unit is to develop an understanding of the behavior factors which lead to wholesome and intelligent relations between the sexes.

NOTE: This unit should be offered in schools where the administration has expressly authorized it.

- (a) Getting Along With Members of the Other Sex
- (b) What Makes One Attractive to the Opposite Sex
- (c) The Importance of a Wise Marital Choice
- (d) Making a Successful Marriage

Unit 7—Planning a Career

Objective

The objective of this unit is to develop in the student an understanding of the psychological approach to career selection.

- (a) Knowledge of Oneself
- (b) Knowing the Work
- (c) Putting (a) and (b) Together
- (d) Getting Along on the Job
- (e) Other Factors

SCIENCE

Objectives of Secondary School Science

The learning of science, as an area of human endeavor, should provide the student with a scientific literacy which enables him to assume an active and useful role as a citizen in a democratic society. It may be assumed that this literacy is best achieved by considering the individual needs of students and through independent study and learning.

Specifically, the following objectives must be achieved in the Secondary School Science:

1. To promote an understanding of the role that science has had in the development of societies:
 - a) history and philosophy of science as part of human history and philosophy
 - b) interaction of science and technology
 - c) effect of science on health, population growth and distribution, development of resources, communication and transportation, etc.
2. To promote an awareness of the humanistic implications of science:
 - a) moral and ethical problems in the use and misuse of science
 - b) science for leisure-time activities.
3. To develop a critical understanding of those current social problems which have a significant scientific component in terms of their cause and/or their solution:
 - a) depletion of natural resources
 - b) pollution of water and air
 - c) over-population
 - d) improper use of chemicals
 - e) science for the consumer.
4. To promote understanding of and development of skill in the methods used by scientists:
 - a) processes in scientific inquiry such as observing, hypothesizing, classifying, experimenting and interpreting data
 - b) intellectual abilities such as intuition, rational thinking, creativity, and critical thinking
 - c) skills such as manipulation of materials, communication, solving problems in groups, and leadership.
5. To promote assimilation of scientific knowledge:
 - a) emphasis on fundamental ideas
 - b) relevance of scientific knowledge through inclusion of practical applications
 - c) application of mathematics in science
 - d) interrelationships between the sciences
 - e) open-endedness of science and the tentativeness of scientific knowledge.
6. To develop attitudes, interests, values, appreciations, and adjustments similar to those exhibited by scientists at work.
7. To contribute to the development of vocational knowledge and skill:
 - a) science as a vocation
 - b) science as background to technical, professional and other vocations.

CHEMISTRY 10

(There is no alternate program for this course.)

Texts*Chemistry, An Experimental Science.* (Chem. Study).*Laboratory Manual to Accompany Chemistry, An Experimental Science.***Course Outline**

Chapter Number	Chapter Title	Experiment Number (s)
1	Chemistry: An Experimental Science	1, 2, 3, 4 and 5
2	A Scientific Model; The Atomic Theory	6, 7
3	Chemical Reactions	8
4	The Gas Phase: Kinetic Theory	9
5	Liquids and Solids: Condensed Phases of Matter	10, 11
6	Structure of the Atom and the Periodic Table	

NOTE: Consult the Curriculum Guide for details concerning suggested time, omissions and optional material, etc.

PHYSICS 10

(Alternative programs are available.)

Alternative I Program**Text**Stollberg, Hill and Nygaard. *Fundamentals of Physics*.**Course Outline**

Chapter Number	Chapter Title	Investigation Number (s)
1	The Science of Physics	1
	Some Mathematics Basic to Physics	
	Scientific Notation	
	Significant Digits	2A
	Graphing Exp. Data	
	Percent Error	
	The Slide Rule	3
2	Motion and Measurement	2B, 5
3	Force and Motion	6
4	Work and Energy	4

Chapter Number	Chapter Title	Investigation Number (s)
5	Force in Fluids	7
6	Molecules and Atoms in Motion	9, 10
7	Measurement of Temp. and Heat	12
8	Heat and Change of Physical State	13, 14

NOTE: Consult the Curriculum Guide for details concerning suggested time, omissions and optional material, etc.

PHYSICS 10

Alternative II: Physics (PSSC) 1st or 2nd Edition

Laboratory Guide for Physics

Course Outline

1st Edition of textbook <i>Physics</i>	2nd Edition of textbook <i>Physics</i>
Part I—The Universe Chapter 1—What is Physics Chapter 2—Time and Measurement Chapter 3—Space and Its Measures Chapter 4—*Functions and Scaling Chapter 5—Motion Along a Path Chapter 7—Mass Elements and Atoms (Sec. "A" only) Chapter 9—The Nature of a Gas	Part I—The Universe Chapter 1—An Introduction to Physics Chapter 2—Time and Measurement Chapter 3—Space and Its Measures Chapter 4—*Functions and Scaling Chapter 5—Motions Along a Straight Line Path Chapter 7—Mass and the Elements (Omit secs. 7.6-7.8) Chapter 9—The Nature of a Gas.
It is suggested that the additional topics which readily lend themselves to experimental approach be added—e.g., Pressure in Liquids; Archimedes' Principle, Heat and Change of State Expansion (Linear only).	It is suggested that the additional topics which readily lend themselves to experimental approach be added—e.g., Pressure in Liquids; Archimedes' Principle, Heat and Change of State Expansion (Linear only).
Experiments: Part I—1, 2, 3, 5, 12, 13, 14, 17. *The main purpose of Chapter 4 is to interpret experimental data. Pupils should acquire skill in: (i) Reading and Interpreting Graphs (ii) Constructing Graphs from Given Data (iii) Deriving Empirical Formulas from Graphs Based on Experimental Data.	Experiments: Part I—1, 2, 3, 5, 11, 12, 13, 16. *The main purpose of Chapter 4 is to interpret experimental data. Pupils should acquire skills in: (i) Reading and Interpreting Graphs (ii) Constructing Graphs from Given Data (iii) Deriving Empirical Formulas from Graphs Based on Experimental Data.
In connection with Chapter 4, teachers are encouraged to perform other experiments which would provide essential data for graphic and algebraic interpretation.	In connection with Chapter 4, teachers are encouraged to perform other experiments which would provide essential data for graphical and algebraic interpretation.
Students should be taught how to use a slide rule early in this course.	Students should be taught how to use a slide rule early in this course.

CHEMISTRY 20

(Alternative programs available)

Alternative I Program

Text

Chemistry, An Experimental Science. (CHEM Study).

Laboratory Manual to Accompany Chemistry, An Experimental Science.

Course Outline—Alternative I

Chapter Number	Chapter Title	Experiment Number(s)
Review of Science 10 (CHEM. Study)		
13	Chemical Calculations	23
14	Why We Believe in Atoms	24, 25, 8*
15	Electrons and the Periodic Table	10* or 1**
16	Molecules in the Gas Phase	11* or 2**
17	The Bonding in Solids and Liquids	27

* Optional experiments from *Laboratory Investigations in Chemistry*—Davis and Allen (see Chemistry 30 Alternative I Outline).

** Optional experiments from Chapter 7, *Elements of Chemistry*—Radomsky, Kass, and Pickard (see Chemistry 20, Alternative II Outline).

NOTE: Consult the Curriculum Guide for details concerning suggested time, omissions, etc.

CHEMISTRY 20

Alternative II Program

Text

Radomsky, Kass and Pickard. *Elements of Chemistry*.

Course Outline—Alternative II

Chapter Number	Chapter Title	Experiment Number(s)
1	The Fundamental Particles	
2	The Structure of the Atom	1
3	The Periodic Classification of Elements	
4	Chemical Bonds (omit sec. c (ii) and (iii) under molecular shape)	2, 4
5	Naming of Compounds	
6	Formula Weights and Volumes	5, 6, 9 and 10
7	Experiments on Unit I and Unit II	
8	The Chemical Equation	1
9	Solutions	3, 5, 6 and 7
*10	The Alkali Metals	8
*11	The Halogens	9, 10 and 12
12	Experiments on Unit III	

* These Chapters should be discussed along with Chapters 1, 2 and 3.

NOTE: Consult the Curriculum Guide for details concerning suggested time, omissions and optional material, etc.

PHYSICS 20

(Alternative programs are available.)

Alternative I Program

Text

Stolberg, Hill, Nygaard. *Fundamentals of Physics*.

Course Outline—Alternative I

Chapter Number	Chapter Title	Investigation Number(s)
	Some Mathematics Basic to Physics (see Phys. 10)	Steps 1-8 Inv. 3
9	Nature of Waves	*15, *16
10	Sound	17, 18
11	The Wave Nature of Light	*19, 20, 25
12	Reflection of Light	*21
13	Refraction of Light	*22, *23
14	Color	*24
5	Forces in Fluids	8
15	Frontiers of Physics	

* P.S.S.C. equipment may be substituted if available.

NOTE: Consult the Curriculum Guide for details concerning suggested time, omissions and optional material, etc.

PHYSICS 20

Alternative II: Physics (PSSC) 1st or 2nd Edition

Laboratory Guide for Physics

Course Outline

1st Edition of textbook *Physics*

Part II—Optics and Waves

- Chapter 11—How Light Behaves
- Chapter 12—Reflection and Images
- Chapter 13—Refraction
- Chapter 14—Lenses
- Chapter 15—The Particle Model of Light
- Chapter 16—Introduction to Waves
- Chapter 17—Waves and Light
- Chapter 18—Interference (Omit Section 18.5)
- Chapter 19—Light Waves (Omit Sections 19.5 to 19.8)

2nd Edition of textbook *Physics*

Part II—Optics and Waves

- Chapter 11—How Light Behaves
- Chapter 12—Reflection and Images
- Chapter 13—*Refraction
- Chapter 14—The Particle Model of Light
- Chapter 15—Introduction to Waves
- Chapter 16—Waves and Light
- Chapter 17—Interference (Omit Section 17 - 5)
- Chapter 18—Light Waves (Omit Sections 18.5 - 18.8)

Experiments:

Part II—1, 2, 3, 4, 5, 7, 8, 9, 10, 11
 (Omit Experiment 11 - 6)

Teachers should consider the teaching of Sound as a natural extension of the study of waves. It is recommended that **Chapter 10** and **Investigation 18** in **Fundamentals of Physics**, Stollberg-Hill-Nygaard be studied in this course.

Experiments:

Part II—1, 2, 3, 4, 5, 6, 7, 8, 9, 10,
 11, 12, 13, 16
 (Omit Experiment 11 - 6)

Teachers should consider the teaching of Sound as a natural extension of the study of waves. It is recommended that **Chapter 10** and **Investigation 18** in **Fundamentals of Physics**, Stollberg-Hill-Nygaard be studied in this course.

*It is suggested that application of lenses in cameras, projectors, the eye, and simple magnifier, the compound microscope and the telescope, be studied. Good sources of information of application of lenses will be found in **Chapter 14** (Sections 14.4 - 14.7) of 1st Edition of PSSC text, and Chapter 13 of **Fundamentals of Physics**, Stollberg-Hill-Nygaard.

CHEMISTRY 30

(Alternative programs are available.)

Alternative I Program**Texts**

Sienko and Plane. *Chemistry*. Canadian edition.

Davis and Allen. *Laboratory Investigations in Chemistry*.

Course Outline—Alternative I

Chapter Number	Chapter Title	Experiment Number(s)
Part I		
2	Nature of Matter	
3	Atoms	
4	Chemical Bond	
5-5.7	Stoichiometry	
Part II		
5.9	Stoichiometry	1 and 12
6	Gases	13
7	Liquids	
8	Solids	15
10	Solutions	2, 3 and 17

Chapter Number	Chapter Title	Experiment Number(s)
12	Chemical Kinetics	
14	Electro Chemistry	19, 20
24	Group IV Elements (Omit Secs. 3, 5, 6, 7, 8 and 9)	
28	Organic Chemistry (Omit Secs. 3, 4 and 5)	25
	Quantitative Analysis	26, 27, 28

NOTE: 1. The main emphasis in this program should be on Part II as outlined above.

2. Consult the Curriculum Guide for details concerning suggested time, omissions and optional material, etc.

CHEMISTRY 30X

Alternative II Program

Texts

Chemistry, An Experimental Science. (Chem. Study).

Laboratory Manual to Accompany Chemistry, an Experimental Science.

Course Outline—Alternative II

7	Energy Effects in Chemical Reactions	12, 13
8	The Rates of Chemical Reactions	14
9	Equilibrium in Chemical Reactions	15
10	Solubility Equilibria	16
11	Aqueous Acids and Bases	17, 18, 19
12	Oxidation—Reduction Reactions	20, 21
18	The Chemistry of Carbon Compounds	28, 29
19	The Halogens	30, 31

NOTE: Consult the Curriculum Guide for details concerning suggested time, omissions and optional material, etc.

PHYSICS 30

(Alternative programs are available.)

Alternative I Program

Text

Stollberg, Hill. *Frontiers of Physics*.

Course Outline—Alternative I

Chapter Number	Chapter Title	Investigation Number(s)
Some Basic Physics (see Physics 10 outline).		
1	Motion and Measurement	4*
2	Force and Motion	7, 8
3	Work and Energy	10
4	Matter and Energy	11, 12
6	Forces in Equilibrium	15, 16, 17
7	Forces and Simple Machines	18
9	Magnetism and Electromagnetism	22, 23
10	Electric Energy and Electric Circuits	
11	Direct Current	24, 25, 26
12	Moving Charges in Magnetic Fields	27, 28
13	Alternating Current	
16	Particles, Accelerators and Holes	

* P.S.S.C. equipment may be substituted if available.

NOTE: Consult the Curriculum Guide for details concerning suggested time, omissions and optional material, etc.

PHYSICS 30X

Alternative II Program

Text

Physics (P.S.S.C.)

Course Outline—Alternative II

Physics 30X—Using 1st Edition of Textbook, Physics	Physics 30X—Using 2nd Edition of Textbook, Physics
Part I—The Universe	Part I—The Universe
Review	Review
Chapter 2—Time and Measurement (Sec. 4 and 7)	Chapter 2—Time and Measurement (Sec. 4 and 7)
Chapter 3—Space and Its Measurement (Sec. 5 to 7 incl.)	Chapter 3—Space and Its Measures (Sec. 5 to 7 incl.)
Chapter 4—Functions and Scaling New Work (Sec. 3 and 4)	Chapter 4—Functions and Scaling New Work (Sec. 3 and 4)
Chapter 5—Motion Along a Path (1-7 omitting 8)	Chapter 5—Motion Along a Straight-Line Path (Sec. 1-8 incl.)
Chapter 6—Vectors (Sec. 1 - 6 incl.)	Chapter 6—Motion in Space Sec. 1-7 incl.)
Part III—Mechanics	PART III—Mechanics
Chapter 20—Newton's Law of Motion	Chapter 19—Newton's Law of Motion
Chapter 21—Motion at the Earth's Surface (Sec. 1 - 8 incl.)	Chapter 20—Motion at the Earth's Surface (Sec. 1-8 incl.)
Chapter 22—Universal Gravitation and the Solar System Sec. 6-11; Read 1-5)	Chapter 21—Universal Gravitation and the Solar System (Sec. 6-11; Read 1 to 5)
Chapter 23—Momentum and Conservation of Momentum Sec. 1-4; Read 5-8)	Chapter 22—Momentum and the Conservation of Momentum (Sec. 1-4; Read 5 to 7 and rockets)
Chapter 24—Work and Kinetic Energy Sec. 1-8, 10, 11)	Chapter 23—Work and Kinetic Energy (Sec. 1-8, 10, 11)
Chapter 25—Potential Energy	Chapter 24—Potential Energy
Chapter 26—Heat, Molecular Motion Conservation of Energy	Chapter 25—Heat, Molecular Motion, Conservation of Energy

Physics 30X—Using 1st Edition of Textbook, Physics	Physics 30X—Using 2nd Edition of Textbook, Physics
Experiments:	Experiments:
III—2, 3, 4, 5, 6, (8), 9, 10, 11, 12, 13, 14	III—1, 2, 3, 4, 5, (7), 9, 10*, 11, 12, 13.
Part IV—Electricity and Atomic Structure	Part IV—Electricity and Atomic Structure
Chapter 27—Some Qualitative Facts About Electricity	Chapter 26—Some Qualitative Facts About Electricity
Chapter 28—Coulomb's Law and the Elementary Electric Charge (Sec. 1-7 incl.)	Chapter 27—Coulomb's Law and the Elementary Electric Charge (Sec. 1-7 incl.)
Chapter 29—Energy and Motion of Charges in Electric Fields (Sec. 1-8, 13, 14)	Chapter 28—Energy and Motion of Charges in Electric Fields (Sec. 1-7 incl.)
Chapter 30—The Magnetic Field	Chapter 29—Electric Circuits (Sec. 4 and 5)
Chapter 31—Electro-magnetic Induction and Electro-Magnetic Waves	Chapter 30—The Magnetic Field
Chapter 31—Electro-magnetic Induction and Electro-Magnetic Waves	Chapter 31—Electro-magnetic Induction and Electro-magnetic Waves

Experiments:

IV—1 to 10

Experiments:

IV—1, 2, 3, 4, (5)*, (6)*, 7, (8)*, (9)*, 10, 11, 12, 13

NOTE: Consult the Curriculum Guide for details concerning suggested time, omissions and optional material, etc.

* Do not appear in 1st edition.

SCIENCE 11

Introductory Statement

Science 11, as a program, should continue to emphasize skills, concepts, attitudes, humanistic and social implications of science which have been developed for the elementary and junior high school grades.

In this course, content is significant only to the degree that it provides for the realization of other objectives of the course. Student interest should be a significant criterion in the selection of learning experiences.

Major Objectives of Science 11

1. To enhance the student's self-image and develop a positive attitude toward science. The student should:
 - a) pursue areas of personal interest
 - b) participate in activities in which he/she can experience success.
2. To develop a critical understanding of some current social problems which have a significant scientific component in terms of their cause and/or their solution. The students might study problems such as:

- a) depletion of natural resources
- b) pollution of water and air
- c) over population
- d) improper use of chemicals
- e) science for the consumer.

3. To help students appreciate the scope of science. That is, the student should:

- a) recognize that science is a basic part of modern living
- b) recognize that science involves both inquiry processes and conceptual patterns
- c) recognize the interaction of science, the arts and the humanities
- d) recognize that the achievements of science and technology, properly used, are basic to the advancement of human welfare.

Rationale for the Science 11 Program

Student involvement in Science 11 should lead to successful experiences in learning and studying in various fields of science. During this course, it is hoped that students, as a result of their successful experiences, will develop an attitude which allows them to realize the changes on their lives which science brings about.

It is understood that the students taking Science 11 will have, in relation to science, a wide range of attitudes, interest, abilities, backgrounds, experiences, and knowledge. In order to assist teachers of these students in selecting relevant materials for their students, a wide range of resources for classroom use has been identified. These resources, however, are not meant to be restrictive and teachers should feel free to supplement them.

Recommended Resource Materials

1. Class activity units*
2. Student projects*
3. a) *Ideas and Investigations in Science-Biology*, by Wong and Dolmatz (Prentice-Hall)
This text contains five Biology Ideas
Idea 1: Inquiry
Idea 2: Evolution
Idea 3: Genetics
Idea 4: Homeostasis
Idea 5: Ecology
- b) *Ideas and Investigations in Science-Physical Science*, by Dolmatz and Wong (Prentice-Hall)
This text contains five Physical Science Ideas
Idea 1: Predicting
Idea 2: Matter
Idea 3: Energy
Idea 4: Interaction
Idea 5: Technology.

NOTE: Individual Ideas in both Biology and Physical Science are available from the School Book Branch in soft cover format.

*For a sample activity unit and student projects refer to the Science 11 Curriculum Guide, 1971. For a more extensive listing of activity units and student projects (with references) refer to the special School Book Branch publication entitled *Science Activity Units and Projects* (Teacher reference only).

PHYSICS 22

Physics 22 is designed for students in Vocational High schools who are taking programs which articulate with the Institutes of Technology, e.g., Drafting, Electronics, Machine Shop. It is expected that students in other programs may elect this course. Teachers should feel free to adjust the content and method of presentation to the capabilities of their classes; however, it is felt that students in the articulated programs should substantially cover the program as outlined:

Texts

White. *Physics, An Exact Science.*

White. *Laboratory Exercises to Accompany Physics, An Exact Science.*

or

White. *Physics, An Experimental Science.*

White. *Laboratory Exercises to Accompany Physics, An Experimental Science.*

Course Outline

1. Introduction—Lessons 3, 4*.

2. Properties of Matter—Lessons 4, 5*, 6, 7*.

3. Light—Lessons 1, 2, 3*, 4, 5*, 6, 7, 8*, 9, 10*, 11, 12, 13*, 14, 15*.

* The lessons which are marked with an asterisk are laboratory exercises.

** Please note that the course has **not** been revised and teachers using *Physics, An Experimental Science* should choose the equivalent lessons to those found in *Physics, An Exact Science*.

PHYSICS 32

As for Physics 22, Physics 32 is designed for students in Vocational High schools who are taking programs which articulate with the Institutes of Technology and is expected to be equivalent to the Year "A" Physics program in the technical institutes. Information on course content and laboratory exercises follows:

Texts

White. *Physics, An Exact Science.*

White. *Laboratory Exercises to Accompany Physics, An Exact Science.*

or

White. *Physics, An Experimental Science.*

White. *Laboratory Exercises to Accompany Physics, An Experimental Science.*

Course Outline

1. Mechanics

Lessons 1, 2*, 3, 4*, 5, 6, 7, 8*, 9, 10, 11*, 12, 13*, 14, 15, 16*, 17, 18*, 19, 21, 23, 24, 27, 29, 30*, 31, 32, 33*.

2. Electricity

Lessons 1, 2, 3, 4*, 5, 6*, 7, 9.

3. Heat

Lessons 1, 3, 7*, 8, 9, 11, 12*.

* The lessons which are marked with an asterisk are laboratory experiments.

** Please note that the course has **not** been revised and teachers using *Physics, An Experimental Science* should choose the equivalent lessons to those found in *Physics, An Exact Science*.

BIOLOGY 10**Recommended Texts (in order of preference)**

High School Biology. 1968 edition. BSCS, Green Version. W. J. Gage.

*Otto and Towle. *Modern Biology.* 1965 edition. Holt, Rinehart and Winston.

Biological Science, An Inquiry Into Life. 1968 edition. BSCS, Yellow Version. Harcourt, Brace and World.

Student Laboratory Guide to *Biological Science, An Inquiry Into Life.*

*It is recommended that those who choose Otto and Towle as the basic text use the BSCS Yellow Version laboratory guide.

Objectives

1. To explore the current critical environmental problems of human overpopulation, and resource management.
2. To learn the basic principles of the classification of organisms and the application of these principles in the construction of keys.
3. To learn the reasons for, and the techniques of, collecting and maintaining appropriate biological specimens and to develop an appreciation of the importance of these activities.
4. To develop an understanding of the principles of ecology.
5. To study the principles of cytology and heredity.

Course Outline**Unit I.—Student Biology Project**

This project will be guided by the teacher but will be selected and carried out by the student (or group of students). The project can be in any area of biology but should involve laboratory and/or field research and the writing of a report. It will be started early, will run concurrently with other units, and may continue until the end of the course.

Unit II.—Classification

1. Basis of classification
2. Collecting
3. Preserving specimens
4. How to make a key and use of a key.

Unit III.—Ecology

1. Ecosystems and communities
2. Environmental factors
3. Interaction
4. Resource management with emphasis on pollution and conservation.

Unit IV.—Cell Theory and Genetics

1. Cell theory
2. Mitosis and meiosis (chemistry not included)
3. Mutation and selection (adaptation)
4. Selective breeding (plant and animal)
5. Human overpopulation.

BIOLOGY 20**Recommended Texts** (in order of preference)

Biological Science, An Inquiry Into Life. 1968 edition. BSCS, Yellow Version. Harcourt, Brace and World.

Student Laboratory Guide to *Biological Science, An Inquiry Into Life.*

*Otto and Towle. *Modern Biology.* 1965 edition. Holt, Rinehart and Winston.

High School Biology. 1968 edition. BSCS, Green Version. W. J. Gage.

*It is recommended that those who choose Otto and Towle as the basic text use the BSCS Yellow Version laboratory guide.

Objectives

1. To further investigate the principles of ecology by carrying out a field or laboratory project.
2. To study the theories of biological evolution.
3. To show the development and relationship of form and function by comparative study of representatives of the biological kingdoms. The study of man is to be included.

Course Outline**Unit I.—Student Ecology Project**

This project will be guided by the teacher but will be selected and carried out by the student (or group of students). The project can be in any area of ecology and should involve laboratory and/or field research and the writing of a report. It will be started early, will run concurrently with other units, and may continue until the end of the course.

Unit II.—Evolutionary Development

1. Review Unit IV, Part 3, of Biology 10
2. The theories of evolution.

Unit III.—Biological Kingdoms

1. The two-, three-, and four-kingdom systems
2. The relationship of form and function in the study of comparative anatomy, morphology and life cycles of selected representatives of the kingdoms.

BIOLOGY 30**Recommended Texts**

McElroy, W., et al. *Foundations of Biology*. Scarborough: Prentice-Hall of Canada Ltd., 1968.

Ehrenfeld, D. *Biological Conservation*. Toronto: Holt, Rinehart and Winston, Inc., 1970.

Laboratory Manual

Abramoff, P., and R. G. Thomson. *Investigations of Cells and Organisms*. Scarborough: Prentice-Hall of Canada Ltd., 1969.

Secondary Reference

Weisz, P. *Elements of Biology*. Third edition. Toronto: McGraw-Hill Company of Canada Ltd., 1969.

Objectives

1. To study with examples from different biological kingdoms the following processes:
 - a) ingestion and absorption of raw materials, food and gases
 - b) movement of materials
 - c) elimination and excretion
 - d) photosynthesis and other syntheses
 - e) digestion
 - f) energy relationships, including respiration
 - g) sensitivity and movement; nervous and hormonal control
2. To provide an opportunity for the study and discussion in greater depth than Biology 10 of current biological problems.
3. To further develop investigative skills and understanding by carrying out a biology project, preferably in the field or laboratory.

Course Outline**Unit I — Biological Processes**

1. Ingestion and absorption of raw materials, food and gases
2. Movement of materials
3. Elimination and excretion
4. Photosynthesis and other syntheses
5. Digestion
6. Energy relationships, including respiration
7. Sensitivity and movement; nervous and hormonal control

Unit II — Current Biological Problems**Unit III — Student Project**

For a detailed discussion of the above units, teachers are advised to refer to the revised 1971 High School Biology Curriculum Guide.

SOCIAL STUDIES

Rationale

Alberta's new social studies curriculum (Grades I-XII) is premised on the assumption that schools must help students in their quest for a clear, consistent and defensible system of values. Schools have long been concerned with the attitudinal development of their students; however, this concern has been more implicit than explicit. Now, as our society becomes more and more pluralistic, schools must assume the explicit responsibility of cooperating with the home, the church, and other social agencies in helping students find how to live and what to live for.

Free choice of values to live by

In keeping with the basic tenets of democracy (and with optimism about the nature of man and the efficacy of democratic ideals), the new social studies invites free and open inquiry into the definition and application of individual and social values. Such inquiry will serve the humanistic¹ goals of education by offering students *experience in living* and not just *preparation for living*. By actively confronting value issues, students will come to know the ideas and feelings of themselves, their peers, and the adult generation; they will deal not only with the "what is" but also with the "what ought to be" and will have the opportunity to make this world a more desirable place in which to live.

ATTENDING TO AFFECTIVE AND COGNITIVE OBJECTIVES²

A. *The Valuing Process*

Priority on Valuing

Consistent with the above rationale, the objectives of the new social studies place high priority on the valuing process. The valuing process involves three basic skills.³ Students in the Alberta social studies should demonstrate that they are:

Acting upon Values

Choosing	<ul style="list-style-type: none"> — 1. Identifying all known alternatives — 2. Considering all known consequences of each alternative — 3. Choosing freely from among alternatives
Prizing	<ul style="list-style-type: none"> — 4. Being happy with the choice — 5. Affirming the choice, willingly and in public if necessary
Acting	<ul style="list-style-type: none"> — 6. Acting upon the choice — 7. Repeating the action consistently in some pattern of life

Affective and cognitive aspects of valuing

As students engage in the valuing process, the experience will involve both emotional reactions and intellectual understandings. It is essential to distinguish these affective and cognitive capacities and to direct educational effort along both dimensions.⁴

¹Humanistic education strives to develop the full human potential of each child. It is not inconsistent with the application of theistic goals.

²Please note that the objectives which follow are expressed in behavioral terms. They indicate the processes in which students should engage and, in a general way, identify the substantive content to which students' behavior should relate. In other words, the objectives include both processes and content.

³Raths, Louis, et al., *Values and Teaching* (Columbus, Ohio: Charles E. Merrill & Co., 1966).

⁴Scriven, Michael, "Student Values as Educational Objectives" (West Lafayette, Ind.: Social Science Education Consortium, 1966), p. 18.

*Internalizing
a value
complex*

B. *Affective Objectives*

Affective objectives emphasize a feeling tone, an emotion, or a degree of acceptance or rejection. To choose, prize and act consistently and effectively, students should demonstrate that they are:

- Aware of values, willing to take notice of values, and giving controlled or selected attention to values
- Responding to values with openness, willingness and satisfaction
- Accepting values, preferring values and committing themselves to values
- Conceptualizing their own values and organizing a value system
- Becoming characterized by a value or value complex.⁵

The values referred to above should, at the awareness and response levels, include a wide range of individual and social values. Students eventually should accept, prefer, and commit themselves to certain of these values, while rejecting others. Finally, they should conceptualize their own values, organize a value system, and through their actions, become characterized by a particular value or value complex.

*Value issues
as content*

A powerful means of attaining these affective objectives is to have students confront real problems that involve conflicting values. Such problems may be referred to as value issues. Focusing upon value issues can enable students to clarify their own values and to recognize the value positions of others. Peer relationships, family matters, work, politics, religion, money, recreation, morality, culture, and other problem areas are fertile sources of value issues. The most potent of value issues will require students to examine their own behavior relative to:

1. The dignity of man
2. Freedom
3. Equality
4. Justice
5. Empathy
6. Loyalty
7. Other values.

⁵Krathwohl, David, et al., *Taxonomy of Educational Objectives: Affective Domain* (New York: David McKay Co., Inc., 1964).

*Cognitive
skills
summarized*

*Categories of
knowledge
content*

C. *Cognitive Objectives*

Cognitive objectives involve the solving of some intellectual task. The choosing, prizes and acting phases of the valuing process require that each student develop cognitive skills that will enable him to work with others in the solving of social problems. The cognitive skills which are exercised in problem solving are varied and complex. These skills may be summarized as follows.⁶ Students should be able to:

- Recall and recognize data which are pertinent to social problems
- Comprehend pertinent data (This skill includes the ability to translate, interpret and extrapolate from data.)
- Analyze pertinent data in order to identify elements, relationships and organizational principles
- Evaluate pertinent data in terms of internal and external criteria
- Synthesize pertinent data in order to create an original communication or propose a plan of action
- Apply pertinent data in the solving of social problems.

The "data" referred to in the above objectives might be drawn from everything man knows, believes, and can do — both formally structured knowledge from the disciplines and informally structured knowledge from ordinary experience.⁷ Such data include:

- Knowledge of specific terminology and facts
- Knowledge of ways and means of dealing with social problems
- Knowledge of concepts, generalizations, theories and structures.⁸

Knowledge of specific terminology and facts should serve as a basis for dealing with social problems and understanding concepts, generalizations, theories and structures.

⁶Bloom, Benjamin, et al., *Taxonomy of Educational Objectives: Cognitive Domain* (New York: David McKay Co., Inc., 1956) and Sanders, Norris M., *Classroom Questions: What Kinds?* (New York: Harper and Row, 1967). Note that skills have been listed in an order more closely resembling the problem solving process. Bloom's *Taxonomy* lists skills according to difficulty; the order being recall, comprehension, application, analysis, synthesis, and evaluation.

⁷Johnson, Mauritz, *The Translation of Curriculum into Instruction* (Ithaca, N.Y.: Cornell University, 1968), p. 2.

⁸Bloom, *op. cit.*, p. 62 ff.

Problem solving method

Knowledge of ways and means of dealing with social problems should include the ability to:

1. Identify and clarify the problem
2. Formulate hypotheses
3. Collect data
4. Classify data
5. Analyze data and evaluate the desirability and feasibility of taking action on the problem
6. Propose a course of action and examine the desirability and feasibility of taking action on the problem.⁹

Social skills

Knowledge of ways and means of dealing with social problems should also include the ability to:

1. Interpret the feelings and ideas of others
2. Respond to the feelings and ideas of others in a manner appropriate to the occasion
3. Express one's own feelings and ideas to others
4. Cooperate with others, though not to the extent of compromising basic values.

Inter-disciplinary base of social studies concepts

Knowledge of concepts, generalizations, theories and structures should result from students synthesizing the specific data gathered or produced while confronting value issues. Some of the major concepts needed in studying human behavior are outlined below. These concepts should be used by students in developing generalizations and theories which seek to explain people's values.

INTERACTION is a key concept in the understanding of social problems. History, geography and the social sciences describe in part man's interaction with his social and physical environment.

1. **ENVIRONMENT** is, itself, an important concept which can be defined in terms of *Time, Space, Culture and Systems*.
2. Man's interaction with his environment produces **CAUSAL RELATIONSHIPS**. In order to understand causality, one needs to recognize that behavior is affected by *Goals, Norms, Technology, and Power*.
3. Since all man's interactions involve cause and effect relationships, he lives in a state of **INTERDEPENDENCE**. Interdependence may take the form of *Co-operation and/or Conflict* and may produce *Stability and/or Change*.

A diagrammatic representation of the interaction process will be found on page 133.

The spiralling of concepts

These and other concepts should be studied in more than one grade level on the understanding that lower grades will attend to the concept in a specific, concrete and simple manner. Succeeding grades will treat each concept in greater generality, abstractness, and complexity.¹⁰ A diagrammatic representation of spiralling concepts is shown on page 133a.

⁹Simon, Frank, *A Reconstructive Approach to Problem-Solving in the Social Studies* (Calgary: The University of Calgary, 1970). The Simon model differs from most methods of problem solving in that it leads to action on the problem.

¹⁰Taba, Hilda, *Teachers' Handbook for Elementary Social Studies* (Don Mills, Ontario: Addison-Wesley Company, 1967), Chapter 4.

PLANNING FOR THE ATTAINMENT OF MULTIPLE OBJECTIVES

The preceding statements of objectives offer only a general indication of the processes and content of learning opportunities in the social studies. *More detailed planning of learning opportunities is the responsibility of each teacher and class.* All learning opportunities must be consistent with the objectives outlined above, whether the learning opportunity arises from the structured scope and sequence or in connection with a problem of current interest.

A. Structured Scope and Sequence

*Two-thirds time
on structured
scope and
sequence*

Approximately two-thirds of social studies class time will be spent inquiring into themes, value issues and concepts which fall within a scope and sequence specified by the Department of Education. This scope and sequence is very general, thus permitting teachers and students to select learning opportunities according to their own needs and interests. Topics and themes for each grade are indicated below:

Kindergarten — All About Me

Grade I — Families

- Studies of family living, e.g., a contemporary family, a family of long ago, an African family

Grade II — Neighbours

- Interactions among neighbours, e.g., rural and urban neighbours, neighbours in other cultures

Grade III — Comparing People's Communities

- Comparison and contrast of community life, e.g., a modern Indian community and a megalopolis, an African or Asian village and a Pacific community

Grade IV — People in Alberta

- Historical, economic, sociological and/or geographic analysis of Alberta's people — comparison and contrast with other world areas having similar antecedents

Grade V — People in Canada

- Analysis of historical and/or contemporary life in Canadian regions, e.g., an Atlantic fishing port, a French-Canadian mining community, an Ontario manufacturing center, a Prairie town, a B.C. lumbering town.

Grade VI — Historical Roots of Man

- Anthropological analysis and social history of early civilizations, e.g., Egypt, India, Mayas, Canadian Indians, Numidians of Africa.

Grade VII — Man, Technology and Culture in Pre-Industrial Societies

- Conceptual understanding of *Man, Technology and Culture* through case studies of primitive, pre-industrial societies to be selected by teachers and students

Grade VIII — Man, Technology and Culture in Afro-Asian Societies

- Depth studies of societies selected from Africa, Asia (excluding the U.S.S.R.), the Middle East and Pacific Islands

Grade IX — Man, Technology and Culture in Western Societies

- Depth studies of societies selected from the Americas (excluding Canada), Europe, all of U.S.S.R., Australia and New Zealand

Grade X — Canadian Studies

- Historical, economic, sociological, political problems facing Canada

Grade XI — World Problems and Issues

- Tradition versus Change
- Population and Production

Grade XII — World Problems and Issues

- Political and Economic Systems
- Conflict and Cooperation

B. Problems of Current Interest*One-third time unstructured*

Approximately one-third of class time in social studies may be devoted to problems that are of current interest to students and teachers. The Department of Education does not intend to structure the use of this one-third time. Problems which meet the criteria which follow may arise as extensions of the main themes and value issues for each grade. They may relate to problems of individual students, the school, the community, or the world, and may concern the past, the present and/or the future. A given problem may be studied by the whole class, by a group, or by individual students. It is important that a record be kept of the problems studied by each student throughout his or her school career.

Joint Planning

Students and teachers should jointly plan the use of the one-third time. *Generally speaking, the teacher should view the one-third time as an opportunity for students to develop independence and responsibility.* The amount of teacher leadership required in the planning and use of the one-third time will vary according to the ability, experience, and maturity of the class. The teacher's influence should be exerted in a manner and to a degree consistent with this objective.

Distribution of time

The one-third time may be distributed over the school year (or semester) in any way that students and teachers see fit. Three of the many possible alternatives are:

1. One time block, accounting for one-third of total class time, taken at any point during the year.
2. Two- or three-week "units" of time, accounting for one-third of total class time, taken at various points during the year
3. Propitious occasions, accounting for one-third of total class time, taken at opportune times during the year

C. Criteria for Selecting Learning Opportunities

In selecting the processes and content for day-to-day experiences in the social studies curriculum — whether for the two-thirds time broadly structured by the Department of Education or for the one-third time devoted to problems of current interest — teachers and students should attend to the following criteria:

Futurity

1. Does the experience have futurity? That is, can it contribute to the attainment of affective and cognitive objectives?
 - a) Does it involve a pertinent *value issue*?
 - b) Can it contribute to the development of *social and/or inquiry* skills?
 - c) Does it provide for growth in students' understanding of *concepts*?
 - d) Does the experience fit as part of a sequence which will lead to a *pride in Canada* tempered with a *world view* and an understanding of significant *social problems*?

Relevance

2. Is the experience *relevant* to the needs and interests of students?

Materials

3. Are *data and materials* available and/or can students gain experience through gathering primary data?

Overlap

4. Does the experience *avoid* the disadvantageous *overlap* and repetition of experiences in earlier or later grades?

References for Social Studies 10, 20, 30 or 36

A list of suggested references for Senior High courses is being printed by the Department of Education. Distribution will be effected through school board offices as with other curriculum materials. This reference list is a supplement to *Responding to Change — A Handbook for Teachers of Secondary Social Studies*.

SOCIAL STUDIES 10 CANADIAN STUDIES

This course deals with perplexing value issues facing contemporary Canadian society. Value issues should be investigated with the aid of concepts and processes from history, geography and the social sciences.

All the problems studied in the course, national or international, should be studied as they appear in the Canadian context, as the new social studies curriculum includes problems of a strictly international or global nature at other grade levels.

It is suggested that a minimum of three value issues should be studied: one from Value Issues I, II, III, IV; one from Value Issues V, VI, VII; and one from Value Issues VIII, IX, X. One-third of the time may be devoted to the study of problems of current interest to students and teachers.

VALUE ISSUES

I. — Should the endowed and more advanced regions of Canada contribute to the less developed regions of Canada?	Canada Internal
II. — Should poverty be tolerated in the affluent Canadian Society?	Social Economic
III. — Should we encourage the process of urbanization?	Social Economic
IV. — Should Canadians reject a trend toward high mass-consumption?	Canada Internal
V. — Should Canada move toward greater national unity?	Canada Internal
VI. — Should Canada have two official languages?	Political
VII. — Should we encourage greater participatory government in Canada?	Political
VIII. — Should Canada pursue a policy of non-alignment?	Canada External
IX. — Should Canada move toward greater political and economic autonomy?	Social Political
X. — Should Canada "massively" increase her foreign aid?	Economic

SOCIAL STUDIES 20

WORLD PROBLEMS AND ISSUES

The Social Studies 20 course includes the following two units which are structured by the Department of Education and allows one-third time which may be used for the study of problems that are of current interest to students and teachers. The two structured units and the problems of current interest may be taken in any time sequence which the teacher deems suitable.

UNIT ONE

POPULATION AND PRODUCTION

Major Problem

Can the earth support its growing population?

Objectives

The objective of this unit is to develop an awareness of a continuing concern for and a rational approach to problems that arise out of the population increase and scarcity of resources.

Definition of the Problem Through Development of Concepts

Is there a scientifically-measured basis for the widely-expressed fears of a "population explosion", or is there a "credibility gap"?

1. Viewpoints — philosophical, economic, scientific, historical and theological sources
2. Population distribution and growth
3. Systems of production
4. Systems of economy
5. Relationship between population and resources.

Issues Relating to "Population and Production"

1. Can the poor nations of the world expect to achieve a higher standard of living?
2. Should the "revolution of rising expectations" be encouraged?

Criteria for the Selection of Case Studies

1. Societies may be selected from any geographical area, past or present.
2. Selected societies or themes must have clearly recognizable problems of population and production.
3. Research data conclusive to inquiry-learning must be available.
4. Care must be exercised to avoid overlap with themes studied at previous or succeeding grade levels.

UNIT TWO

CHANGE VERSUS TRADITION

Major Problem

Have traditions and departures from traditions served to enhance the dignity of man?

Objectives

1. To show that the most intrinsic values of a people are subject to influence and eventual change as a result of cultural variations, and that these same forces are operative in any society, historic or modern.
2. To show that any society experiences the forces of change and to show how its traditions have yielded to, and resisted these forces.
3. To show the inter-relationship of cultural patterns and values.
4. To be able to identify the values of a society and understand how these values influence the activities of the society.

Definition of the Problem Through the Development of Concepts

1. The phenomenon of change (concept)
2. Forces of change (causes)
3. Consequences of change vs. tradition

Themes Illustrative of the Problem, "Tradition vs. Change"

Teachers may choose from the following themes those which seem best to attain the above objectives. The number of themes to be developed is left to the discretion of teachers.

1. Religion
2. Social Groups
3. Law
4. Creative Expressions (Art Forms)
5. Education

Value Questions (Summary)

1. Should a society attempt to maintain its traditions?
2. What is the relevance of change and/or tradition to:
 - a) society?
 - b) me?
3. What should be the criteria for accepting change?

Criteria for Selecting Societies and Themes to be Studied

1. Societies may be selected from any geographical area, past or present.
2. Selected societies or themes must have clearly recognizable forces of tradition and change.
3. Research data conclusive to inquiry-learning must be available.
4. Care must be exercised to avoid overlap with themes studied at previous or succeeding grade levels.

SOCIAL STUDIES 30

WORLD PROBLEMS AND ISSUES

The Social Studies 30 course includes the following two units which are structured by the Department of Education and allows one-third time which may be used for the study of problems that are of current interest to students and teachers. The two structured units and the problems of current interest may be taken in any time sequence which the teacher deems suitable.

UNIT ONE

POLITICAL AND ECONOMIC SYSTEMS

Economic Systems (General)

1. Basic problem of scarcity
2. Answers to basic economic questions
 - a) What should be produced?
 - b) How should it be produced?
 - c) For whom should it be produced?
3. Systems change

Economic Models (Economic System in its Basic Form Showing Relationship Between Elements)

1. Market
2. Command
3. Traditional

Chief Value Issue: Which economic system is best?

Political Systems

1. Why do political systems exist?
2. Problems faced by political systems
 - a) Leadership — selection and control
 - b) Responding to demands
 - c) Decision-making process involved
 - d) Institutions
 - e) Application of decisions
 - f) Role of the citizen
 - g) Processes of continuation of change

Political Models

1. Totalitarian Polity
2. Democratic Polity
3. Traditional Polity

Chief Value Issue: Which political system is best?

Analytical Case Studies

Suggestion for the examination of case studies

- a) The purpose of case studies is to apply the concepts developed in the previous sections of the unit.
- b) Wherever possible, students should be expected to make value judgments about ideas developed in the case studies.
- c) Students should identify the various adaptations of theory to actual situations.
- d) Establish a working model for evaluating the various features of economic and political systems in the case studies.

UNIT TWO

CONFLICT AND CO-OPERATION

International Conflict

1. Basic reasons for international tension/conflict
 - a) Ideological
 - b) Economic
 - c) Political
 - d) Cultural
 - e) Religious
2. The nature of war in the 20th Century
 - a) Attitudes towards war
 - b) Kinds of war
 - c) Technology in war
 - d) Course of war
 - (1) Initiation
 - (2) Interaction
 - (3) Termination
3. Effects of war
 - a) Political
 - b) Economic
 - c) Cultural
4. Case studies of a variety of wars which have occurred in the 20th Century to illustrate the ideas examined in the preceding sections of the unit
5. Value positions associated with international conflict

Chief Value Issue: Is war a legitimate means of settling disputes among nations?

International Co-operation

1. Basic reasons for international co-operation
 - a) Economic
 - b) Political
 - c) Cultural
2. Nature of international co-operation in the 20th Century
 - a) Attitudes towards co-operation
 - b) Kinds of co-operation
 - c) Effect of technology on co-operation
3. Results of international co-operation in the 20th Century
 - a) Human welfare
 - b) Security
4. Case studies of a variety of examples of international co-operation in the 20th Century to illustrate the ideas examined in the preceding sections of the unit
5. Value positions associated with international co-operation

Chief Value Issue: Are supranational bodies the answer to international conflict?

SOCIOLOGY 20

The general objectives of sociology are:

1. Develop in students a sociological orientation.
2. Communicate a conception of the nature of society, how it operates, perpetuates itself and changes.
3. Create some understanding of the problems of our contemporary, complex society; the processes which give rise to them and how they may best be resolved.

Text

Landis, P. H. *Sociology*. Ginn and Company, 1964.

Course Content**Unit I.—The Science of Sociology.**

- (a) What is sociology?
- (b) Relationship of sociology to other social sciences.
- (c) History of sociology.
- (d) Methods of sociological investigation.
- (e) Impact of sociology on contemporary society.

Unit II.—Man and His Environments: Potentialities and Limitations.

- (a) Heredity and environment.
- (b) The geographical environment.
- (c) The cultural environment.
- (d) The social environment.
- (e) Kinds of groups.
- (f) Forms of interaction.

Unit III.—Culture—The Man-made World.

- (a) The cultural heritage.
- (b) The contemporary Canadian culture.
- (c) Cultural change.
- (d) Cultural lag.

Unit IV.—Groups in Socialization.

- (a) The development of the social self.
- (b) The role of communication.
- (c) Small groups in socialization.
- (d) Secondary groups.
- (e) Human nature.

Unit V.—The Structure of Society.

- (a) Stratification, power and influence.
- (b) Social mobility.
- (c) Canadian social class structure.
- (d) Subcultures.
- (e) Finding our place in an open-class society.

Unit VI.—Governmental Structure and Economic Order.

- (a) The democratic process.
- (b) Government (Umpire and Servant).
- (c) International relationships.
- (d) Persistent problems in foreign affairs.
- (e) The economic system.
- (f) Labour management relations.
- (g) Quest for economic security.

Unit VII.—Minority Groups in Societies.

- (a) Causes of prejudice and discrimination.
- (b) Consequences of prejudice and discrimination.
- (c) Minority group relationships in the world today.
- (d) Reduction of prejudice and discrimination.

Unit VIII.—Marriage and the Family.

- (a) A brief history of the family.
- (b) Types and forms of the family.
- (c) Family formation.
- (d) Why love marriages.
- (e) Contrasting goals in marriage.
- (f) Canadian family structure.
- (g) Values in mate selection.
- (h) Family cycle.
 - (i) The three stages of marriage
 - (j) Problem concepts of dating.
 - (k) Dangers of steady dating.
 - (l) Love and romantic complex.
- (m) Cycle leading to and ending in marriage.
- (n) Divorce.
- (o) Marriage analysis.

Unit IX.—Crime, Punishment and Delinquency.

- (a) The law and crime.
- (b) Crime and punishment today.
- (c) Punishment and reformation.
- (d) Juvenile delinquency.
- (e) Juvenile courts vs. criminal courts.

Unit X.—The Conservation of Human Resources.

- (a) Historical growth of the world's population.
- (b) Present growth.
- (c) Future growth.
- (d) Distribution of population and human ecology.
- (e) History of the community.
- (f) Shift from country to city.
- (g) The modern city.
- (h) Theories of urban ecology.
- (i) New trends in urban ecology.
- (j) Rural problems.
- (k) Education.
- (l) Improving the health of the world.

Unit XI.—Religion and Ethical Ideals.

- (a) Religion, a universal need of man.
- (b) Religious structure.
- (c) Religious roles.
- (d) Religious functions.
- (e) Religion and immortality.
- (f) Religious tolerance.
- (g) Religion and morality.
- (h) Religion and family life.
- (i) Organized religion today.
- (j) Denominationalism.

Unit XII.—The Future of Man.

- (a) Social planning.
- (b) Causes of social problems.
- (c) Present and future social trends and problems.

INDUSTRIAL EDUCATION

INTRODUCTION

Industrial Education is a program consisting of courses which provide a continuum of experiences, starting with exploratory activities in the junior high school and expanding in the high school to the development of skills related to career fields. This development of the student's skills is planned for through courses in industrial arts and vocational education culminating in on-the-job work experience, or entry into a job or post-high school institution for further education.

The program consists of courses ranging from those designed for an exploration of the technologies and trade areas to units of practical preparation for a career. In the process the courses develop the student's knowledge of himself, his talents and his skills.

For information on sequencing and course descriptions, refer to the "Handbook In Industrial Education for Guidance to Teachers, Counsellors and Administrators".

CAREER FIELDS

There are seven career fields upon which Industrial Education focuses. These are:

- Visual Communications
- Mechanics
- Construction and Fabrication
- Electricity-Electronics
- Personal Services
- Performing Arts
- Horticulture

Each of these fields consists of a number of courses in each of the major areas such as: Building Construction, Automotives, Food Preparation, etc.

The Industrial Arts courses develop four areas, namely:

- Visual Communications
- Electricity-Electronics
- Materials
- Power

Each area consists of four units per course. These same units may also be used independently to build the content for the General Technology course.

Objectives

The general objectives of Industrial Education complement the aims and objectives of the secondary school. The objectives of Industrial Education are to:

1. Develop basic competencies both academically and in work skills to enter either a job or a post-high school institution for further education.
2. Provide courses that serve as a vehicle in helping students relate their academic knowledge to vocational competencies.
3. Provide the curriculum content for students to develop fundamental tool and procedural skills that help prepare them to enter a family of occupations.

4. Provide the environment whereby students may develop sound attitudes and habits of work.

For Industrial Arts courses see pages 68-80.

VOCATIONAL COURSES BY CAREER FIELD

I. VISUAL COMMUNICATIONS

Field Objectives

The Visual Communications career field should provide an opportunity to:

1. Introduce students to the career opportunities and activities in the field of Visual Communications.
2. Enable the students to develop the knowledge, craftsmanship, skills and standard of performance necessary for job entry or entry into post-secondary institutions.
3. To help students develop an awareness of the principles and elements of design and apply these to the various fields of Visual Communications.

DRAFTING MAJOR

DRAFTING 12

References

No single text is prescribed. Listed are prime references only.
New Basic Drafting. Davis and Skinner. (1968).

Content

1. Drafting equipment
 - use and care
 - materials
2. Shape description
 - line language
 - object representation
3. Lettering
 - Gothic
 - styles
4. Geometry
 - geometric constructions
5. Reproduction of drawings
 - reproduction methods
6. Pictorial drawing
 - oblique
 - perspective

7. Sectional views
 - cutting plane
 - section lines
 - section types
8. Auxiliary views
9. Dimensioning
 - symbols
 - rules
10. Detail drawing
 - complete description
11. Occupational information

DRAFTING 22A (MACHINE DRAWING)

References

Engineering Drawing and Design. Jensen. (1968).
New Basic Drafting. Davis and Skinner. (1968).

Content

1. Introduction to drawing
 - shape description
 - size description
2. Fabrication and construction processes
 - forming processes
 - fastening devices
 - welding symbols
3. Working drawings

DRAFTING 22B (ARCHITECTURAL)

References

Architectural Drawing Practices. Canadian Government Specification Board.
Architectural Drafting and Design. Hepler and Wallach.

Content

1. Architectural drawing
 - drawing standards
2. Planning and design
 - floor plans
 - elevations
 - orientation
3. Structural systems
4. Working drawings
 - set of working drawings

DRAFTING 32A (ENGINEERING GRAPHICS)

References

Engineering Drawing and Design. Jensen. (1968).

Content

1. Engineering graphics
 - the graphic language
2. Views
 - orthographic
 - oblique
 - perspective
3. Problem solving
 - descriptive geometry
 - revolutions
 - developments and intersections
 - vector geometry
4. Industrial systems
 - piping
 - power transmission systems
 - fluid power
5. Working drawings
 - simple machine

DRAFTING 32B (ARCHITECTURAL, COMMERCIAL)

References

Architectural Drawing Practices. Canadian Government Specifications Board.

Architectural Drafting and Design. Hepler and Wallach.

Content

1. Drafting Practices
 - house plans
2. Planning and design
 - light commercial facilities
 - presentation designs
3. Structural systems
 - materials
 - construction details
 - fastening methods
 - steel
 - reinforced concrete
4. Working drawings

DRAFTING 32C (TOPOGRAPHICAL)

References

Topographic Map and Air Photo Interpretation. Chevrier, Macmillan. *Every Square Inch.* Department of Mines and Resources, Ottawa. *Elements of Topographical Drawing.* Sloane and Montz. (1962).

Content

1. Data gathering
 - surveying
 - photogrammetry
2. Interpretation
 - field notes
 - air photos
3. Geographical data
 - direction
 - location
 - relief
 - physical and cultural features
4. Symbolic Representations
 - scale
 - special drawing equipment
 - lettering
 - symbols
 - map projections

GRAPHIC ARTS MAJOR

VISUAL COMMUNICATIONS 12

References

Photo-offset Fundamentals. Cogoli.
Practical Photography. McCoy.
Practice of Printing, The. Polk.

Content

1. Introduction to common units
 - relationship of commercial art, graphic arts and drafting
 - relationship with industry
 - occupational information
2. Image creation
 - a. Commercial art
 - basic drawing
 - composition and design
 - symbols
 - layout
 - b. Drafting
 - shape
 - dimensioning
 - symbols
 - c. Graphic arts
 - typographical composition
 - layout
 - symbols
3. Conversion processes
 - a. Commercial art
 - image conversion

- b. Drafting
 - reproducing drawings
- c. Graphic arts
 - photography
 - plate making
 - stencil duplicating
- 4. Production processes
 - a. Graphic arts
 - relief printing
 - stencil
 - materials
 - flexography
- 5. Finishing procedures
 - bindery

GRAPHIC ARTS 22A (LETTERPRESS)

References

Practice of Printing. Polk.

Content

- 1. Visual communication
 - relief printing
- 2. Image creation
 - measurement
 - image materials
 - spacing
 - composition and make-up
 - lockup
 - proofing
 - typography
- 3. Conversion
 - plates
- 4. Production
 - letterpress printing
- 5. Finishing
 - bindery

GRAPHIC ARTS 22B (BASIC DUPLICATION AND REPRODUCTION)

References

Offset Fundamentals. Cogoli.
Practical Photography. McCoy.

Content

- 1. History
- 2. Safety
- 3. Image creation
 - principles of design

- copy preparation
- layout preparation
- 4. Conversion processes
 - hot metal
 - photographic
 - strike-on
 - hand assembled
 - combination of processes
 - type selection
 - finishing steps
- 5. Production processes
 - photo-conversion
 - presensitized carriers
 - lithography
 - other
- 6. Finishing Processes
 - quality considerations and cost
 - binding techniques

GRAPHIC ARTS 22C (OFFSET LINE AND HALFTONE)

Reference

Photo-Offset Fundamentals. Cogoli.

Content

- 1. Introduction
 - planographic process
 - line and tonal copy
 - occupations
 - development of photography
- 2. Image creation
 - typography and design
 - layouts
 - copy preparation
 - proofing
- 3. Conversion
 - camera
 - film processing
 - proofing
 - stripping
 - platemaking
- 4. Production
 - offset presswork
 - cutting
 - bindery

GRAPHIC ARTS 32A (ADVANCED LETTERPRESS AND OFFSET)

References

*Lithographer 3 and 2 — Photo-Offset Fundamentals
Practical Photography.* McCoy.

Content

1. Introduction
 - printing processes relief, planographic, stencil, intaglio
2. Image Creation
 - form and function
 - composition
 - photographic illustration
 - paste-ups
 - make-up
3. Conversion
 - variables — dot size, darkroom techniques, light and color
4. Production
 - presswork
5. Finishing
 - bindery

GRAPHIC ARTS 32B (PRODUCTION TECHNOLOGY)

References

General Industry. Lindbeck and Lathrop. (1969)
The Social Psychology of Industry. Brown. (1965)

Content

1. An introduction to industry through production technology
 - modern civilization and industrial dependence
 - facets of industry; men, machines, materials
2. Industry and division of labor
 - job and operation breakdowns
 - flow charts
 - labor allocations
3. Personnel organization
 - industrial organization
 - formal organization
 - informal organization
4. Research and development
 - elements of a salable product
 - industrial research
 - prototype development
5. Simulated industrial production
 - industrial production
 - physical problems
 - sociological problems
6. Technological changes
 - growth of knowledge
 - technological changes and man

GRAPHIC ARTS 32C

The last module of the Graphic Arts sequence is open to students who have completed 30 credits or six modules in the major.

The 125 hours of instruction time available in this module may be used to:

- a. Provide greater depth to a module taken previously. Individual students, groups of students or whole classes may elect to study an area in more detail. This in-depth study would be in duplication and reproduction, letterpress, photography or any of the modules named in the Graphic Arts sequence.
- b. Engage in actual Graphic Arts work supervised by the Graphic Arts teacher as a coordinator and a journeyman on the job.

COMMERCIAL ART MAJOR

VISUAL COMMUNICATIONS 12

Described under Graphic Arts.

COMMERCIAL ART 22A (GENERAL ILLUSTRATION)

Content

1. Introduction
 - relationship of commercial art to other areas of visual communications
 - occupational opportunities
2. Image creation
 - design and drawing
 - constructive drawing
 - expressive drawing
 - design in painting
 - printmaking

COMMERCIAL ART 22B (INFORMATION DESIGN 2D)

Content

1. Introduction
 - educational opportunities
2. Image creation
 - composition and design
 - symbols
 - layout
 - composition and design — three dimensional
 - shape and size

COMMERCIAL ART 22C (DESIGN 3D)

Content

1. Image creation
 - principles and elements of design
 - tools and equipment
 - safety
 - three-dimensional forms
 - visual merchandising
 - exhibits

COMMERCIAL ART 32A (COMMERCIAL ILLUSTRATIONS)

Content

1. Image creation
 - illustration techniques
 - book and magazine illustrations
 - fashion illustrations
 - trademarks and logotypes
 - package design
 - cartoons
 - technical illustrations
 - architectural rendering
 - photography

COMMERCIAL ART 32B (PRODUCTION TECHNOLOGY)

References

General Industry. Lindbeck and Lathrop. (1969)
The Social Psychology of Industry. Brown. (1965)

Content

1. An introduction to industry through production technology
 - modern civilization and industrial dependence
 - facets of industry; men, machines, materials
2. Industry and division of labor
 - job and operation breakdowns
 - flow charts
 - labor allocations
3. Personnel organization
 - industrial organization
 - formal organization
 - informal organization
4. Research and development
 - elements of a salable product
 - industrial research
 - prototype development
5. Simulated industrial production
 - industrial production
 - physical problems
 - sociological problems
6. Technological changes
 - growth of knowledge
 - technological changes and man

COMMERCIAL ART 32C

The last module of the Commercial Art sequence is open to students who have completed 30 credits or six modules in the major.

The 125 hours of instruction time available in this module may be used to:

- a. Provide greater depth to a module taken previously. Individual students, groups of students or whole classes may elect to study an area in more detail. This in-depth study could be in Design 2D or 3D, General Illustration or Commercial Illustration, or any of the modules named in the Commercial Art sequence, or
- b. Engage in actual commercial art work supervised by the Commercial Art teacher as a coordinator of the student and by a craftsman on the job.

II. MECHANICS

Field Objectives

The Mechanics courses should give students an opportunity to:

1. Obtain exposure to, and a basic understanding of, the career field.
2. Develop the basic skills and knowledge to gain job entry or articulation with post-high school institutions.
3. Develop a standard of craftsmanship acceptable to the trade and himself.

RELATED MECHANICS MAJOR

MECHANICS 12

References

No single text is prescribed. Those listed below are recommended as prime references.

Auto Service and Repair. Stockel. (1969 Edition)

Power, Prime Mover of Technology. Duffy. (1972 Edition)

Content

1. Career field study
2. Safety
3. Power sources
 - definition of work
 - prime sources of power
4. Engine electrical systems
5. Reciprocating engines
6. Transmission of power
7. Engines (optional)
 - air stream reaction engines
 - rocket engines
8. Engine analysis
9. Fluidics (optional)
10. Automobile care and ownership

RELATED MECHANICS 22A (POWER SYSTEMS)

References

Auto Service and Repair. Stockel. (1969 Ed.)

Content

1. The internal combustion engine
 - construction and operation of automobile engines
2. The maintenance and repair of the internal combustion engine
 - disassembly procedures
 - assembly procedures
 - engine tune up
3. Engine cooling and lubrication
 - control of heat
 - lubricating systems
 - waste control
 - fuel system service

RELATED MECHANICS 22B (CARPENTRY)**References**

Building Construction: Materials and Methods. Miller. (1968 Edition)
Materials of Construction. Smith. (2nd Edition)

Content

1. Introduction to tools and materials
 - design
 - material
 - basic woodworking processes — sawing, surfacing, shaping
joinery, fastening
 - hand tools
2. Introduction to concrete form construction
 - foundations and footings
 - form design
 - soil types
3. Form construction
 - materials
 - standards
 - functions
 - types
4. Principles and practices in making concrete
5. Floor support framing
6. Wall framing
 - types; Western, post and beam
 - sheathing
7. Ceiling and roof framing
 - terms
 - gable roof framing

RELATED MECHANICS 22C (ELECTRIC WIRING)**References**

Canadian Electrical Code C22.1. (11th Edition)
Interior Electric Wiring. Graham. (6th Edition)

Content

1. Career opportunities in electricity
2. Safety
3. Installation of residential wiring
 - code
 - planning circuits
 - tools commonly used
 - power outlets
 - lighting
 - service panel
 - special circuits
 - wiring practice
4. Maintenance of electrical systems and devices
 - gas furnace heating
 - electric heating
 - rewiring techniques
5. Management practices
 - business organization
 - bidding for work
 - employee concerns

RELATED MECHANICS 32A (MACHINE SHOP)

References

Machining Fundamentals. Walker. (1969 Edition)

Content

1. Safety
2. Tool processes
 - measuring
 - layout
3. Shaping materials
 - hand tools
 - machine tools — power saw, lathe, drill press, grinder
4. Materials
 - identification of various metals
 - heat treatment

RELATED MECHANICS 32B (WELDING)

References

Welding. Pinder.

Content

1. Career field study
2. Trade study
3. Safety
4. Measurement

5. Electric Air Process
6. Oxy-acetylene process
7. Fabrication

RELATED MECHANICS 32C

The last module of the Related Mechanics sequence is open to students who have completed 30 credits or six modules in the major.

The 125 hours of instruction time available in this module may be used to:

- a. provide greater depth to a module taken previously. Individual students, groups of students or whole classes may elect to study an area in more detail to develop more skills. This in-depth study could be an expansion on any of the modules previously completed in the sequence such as; Automotives, Building Construction, Electricity, Welding or Machine Shop.
- b. engage in actual work through a program coordinated by the Related Mechanics teacher and under a qualified person on the job.

AUTOMOTIVES MAJOR

MECHANICS 12

References

Power, Prime Mover of Technology. Duffy. (1972)
Auto Service and Repair. Stockel. (1969)

Content

1. Career field study
 - employment opportunities
 - trade certification
2. Safety
3. Power sources
 - definition of work
 - prime sources of power
4. Engine electrical systems
 - battery
 - generator
 - starter
5. Reciprocating engines
 - types
 - components, fuel, air, mechanical
6. Transmission of power
 - hydraulic systems
 - mechanical
7. Engines (other)
 - air stream reaction engines
 - rocket engines

8. Engine analysis
 - measurement — horsepower, torque
 - fuel system
 - exhaust system
 - cooling system
9. Fluidics (optional)
10. Automobile care and ownership
 - body and chassis
 - tool use
 - lubrication
 - maintenance inspection
 - insurance

AUTOMOTIVES 22A (POWER SYSTEMS)

References

Auto Service and Repair. M. W. Stockel.

Content

1. The internal combustion engine
 - construction and operation
2. The maintenance and repair of the internal combustion engine
 - disassembly procedure
 - engine assembly
 - tune-up
3. Engine cooling and lubrication
 - the heat engine
 - waste control

AUTOMOTIVES 22B (POWER TRAIN)

References

Auto Service and Repair. M. W. Stockel.

Content

1. Power train components and service
 - clutch
 - transmissions
 - drive lines and universal joints
 - rear axle assembly
 - principles of differential gear adjustments
 - disassembly, inspection and assembly of differential
 - axles

AUTOMOTIVES 22C (ALIGNMENT AND BRAKES)

References

Auto Service and Repair. M. W. Stockel.

Content

1. Wheel alignment
 - frame
 - front and suspension systems
 - distribution of weight
 - axle frame relationships
 - tires
 - steering gear
 - shock absorbers
2. Steering geometry
 - adjustments
 - problems related to use and abuse
3. Brakes
 - basic principles
 - common types
 - emergency brakes
 - maintenance and repair

AUTOMOTIVES 32A (FUEL AND TUNE-UP)**References**

Auto Service and Repair. Stockel.
Automotive Diagnosis and Tune-Up. Wetzel.

Content

1. Fuel system
 - types of fuel
 - fuel system components
2. Tune-up
 - test equipment
 - checking other systems of the automobile that relate to tune-up
3. Operational sequence for tune-up.

AUTOMOTIVES 32B (ELECTRICAL SYSTEMS)**References**

Auto Service and Repair. Stockel.
Automotive Electrical Systems. Billiett and Goings.

Content

1. Electricity and magnetism
2. Sources of electrical energy
 - battery
 - generator
 - alternator
3. Application of electricity to the automobile
 - starting system
 - ignition system
 - lights
 - accessories

AUTOMOTIVES 32C

The last module of the Automotives sequence is open to students who have completed 30 credits or six modules in the major.

The 125 hours of instruction time available in this module may be used to:

- a. provide greater depth to a module taken previously. Individual students, groups of students or whole classes may elect to study an area in more detail to develop more skills. This in-depth study could be in power systems, tune-up, or any of the modules named in the Automotives sequence. OR
- b. engage in actual garage work through a program coordinated by the Automotives teacher and under a journeyman mechanic on the job.

AUTO BODY MAJOR

AUTO BODY 12

References

Automotive Collision Work. Venk et al.
Automotive Sheet Metal Repairs. Sargent. (1969)

Content

1. Career field study
 - employment opportunities
 - trade certification
2. Introduction to auto body work
 - auto body components
 - types of damage
 - special equipment use
3. Safety awareness
4. Shop operation
 - procedures
 - welding exercises
4. Oxy-acetylene welding
 - procedures
 - welding exercises
6. Metal finishing
 - tools and processes
7. Painting
 - surface preparation
 - undercoating
 - paint application

AUTO BODY 22A

References

References the same as for Auto Body 12.

Content

1. Alignment
 - analysis of damage
 - use of templates
2. Auto body welding
 - metals
 - practice welds
 - cutting
3. Metal finishing
 - use of heat
 - filling metal
 - painting
4. Auto body trim and hardware

AUTO BODY 22B**Content**

1. Shop operation
 - communications
 - tools
 - shop design
2. Auto body construction
 - body component shaping
 - assembly — welding, fasteners
 - seat construction
3. Alignment theory and practice
 - methods
 - body jack
4. Auto body welding
 - types of welding
 - joints
 - light metal
5. Door repairs

AUTO BODY 22C**Content**

1. The auto body trade
 - management
 - labor relations
2. Introduction to heavy welding
 - cutting
 - gas welding
 - brazing
 - arc welding
3. Bumper repair
4. Frame repair
5. Practice panel

AUTO BODY 32A

Content

1. Estimating auto body damage
 - estimating costs
 - assessing parts and labor
 - sources of parts
2. Spray booth operation
3. Auto body alignment
 - shaping and fitting components
4. Metal finishing
 - patching
5. Live repairs
 - repair fenders, doors, hood, deck lid
 - paint a vehicle

AUTO BODY 32B

Content

1. Estimating and work orders
 - forms
2. Painting
 - technical information sources
 - mixing paint
 - applying paint
3. Frames and alignment
 - frame straighteners
 - wheel alignment
4. Welding
 - types of joints
 - brazing
 - arc welding

AUTO BODY 32C

The final module in the Auto Body major is open to students who have completed 30 credits or six modules in the major.

The 125 hours of instruction time available in this module may be used to:

- a. provide depth to a module taken previously in the sequence. Individual students, groups of students or the whole class may elect to study an area in depth. This depth study could be in advanced alignment, welding, painting or any of the topics in the Auto Body sequence.
- b. engage in actual auto body work on the job supervised by the Auto Body teacher as a work coordinator and by a journeyman.

AIRCRAFT MAINTENANCE MAJOR

MECHANICS 12

Reference

Power, Prime Mover of Technology. Duffy. (1972)

Content

1. Career field study
 - employment opportunities
 - trade certification
2. Safety
3. Power sources
 - definition of work
 - prime sources of power
4. Engine electrical systems
 - battery
 - generator
 - starter
5. Reciprocating engines
 - types
 - components, fuel, air, mechanical
6. Transmission of power
 - hydraulic systems
 - mechanical
7. Engines (other)
 - air stream reaction engines
 - rocket engines
8. Engine analysis
 - measurement — horsepower, torque
 - fuel system
 - exhaust system
 - cooling system
9. Fluidics (optional)
10. Automobile care and ownership
 - body and chassis
 - tool use
 - lubrication
 - maintenance inspection
 - insurance

AIRCRAFT MAINTENANCE 22A

References

Basic Science for Aerospace Vehicles. Northrop.
Maintenance and Repair of Aerospace Vehicles. Northrop.
Power Plants for Aerospace Vehicles. Northrop.

Content

1. Basic aeronautical theory
 - aircraft parts
 - control factors
 - flight controls
 - instruments
2. Aircraft woodwork
 - materials
 - tools
 - procedures
3. Fabric coverings
 - materials and procedures
4. Aircraft metals and heat treatment
 - physical properties
 - metal identification and treatment
5. Plastics
 - classification
 - fabrication

AIRCRAFT MAINTENANCE 22B

References

References as listed in 22A.

Content

1. Aircraft sheet metal work
 - aluminum alloys
 - fasteners
 - fabrication
2. Aircraft bench metal work and welding
 - tools and equipment
 - welding

AIRCRAFT MAINTENANCE 22C

Content

1. Flight controls and rigging
 - control
 - repair procedures
 - safety awareness
 - fire extinguishing
2. Weight and balance
 - weight
 - reports
3. Aircraft systems
 - fuel and lubrication system
 - heating and ventilating system
 - de-icing and anti-icing systems
 - oxygen systems
 - water and waste systems

4. Aircraft hydraulics
 - principles of hydraulics
 - components
 - hydraulic systems in an aircraft
5. Aircraft brakes
 - types
 - service

AIRCRAFT MAINTENANCE 32A

References

References as listed in Aircraft Maintenance 22A.

Content

1. Aircraft powerplants
 - history
 - engine classifications
 - heat engine
 - engine systems
 - log book
2. Propellers
 - design and function
 - types
 - maintenance
3. Electrical systems
 - basic electricity
 - generators and motors (AC and DC)
 - wiring installation

AIRCRAFT MAINTENANCE 32B

Content

1. Overhaul procedure
 - inventory and records
 - disassembling
2. Engine overhaul
 - parts reconditioning
 - engine assembly
 - engine testing

AIRCRAFT MAINTENANCE 32C

The last module of the Aircraft Maintenance sequence is open to students who have completed 30 credits or six modules in the major.

The 125 hours of instruction time available in this module may be used to:

- a. provide greater depth to a module taken previously. Individual students, groups of students or whole classes may elect to study an area in more detail to develop more skills. This in-depth study could be in power systems, fabrication, or any of the modules named in the Aircraft Maintenance sequence, OR
- b. engage in actual work through a program coordinated by the Aircraft Maintenance teacher and under a qualified mechanic on the job.

III. CONSTRUCTION AND FABRICATION

Field Objectives

The Construction and Fabrication career field should provide a student an opportunity to:

1. Gain an understanding of the career field.
2. Develop skills and knowledge necessary for job entry and/or articulation with post-secondary educational institutions.
3. Develop a standard of performance acceptable to craftsmen in the trade, government and industry.
4. Study union organization and legislation regulating working conditions.

BUILDING CONSTRUCTION MAJOR

BUILDING CONSTRUCTION 12

References

Building Construction: Materials and Methods. Miller.
Materials of Construction: Smith. (2nd Edition)

Content

1. Tool processes used in measuring and layout.
 - measuring and layout tools
2. Safety
3. Shaping materials
 - removal
 - combining
 - forming
4. Tool maintenance
5. Applied mathematics and measurement
 - trade mathematics
 - measurement systems (English, metric)
6. Planning and design
7. Materials
 - wood
 - glue
 - wood finishes
8. Career field study
 - occupations
 - employment opportunities

BUILDING CONSTRUCTION 22A (Cabinet and Furniture Making)

References

Cabinet Making and Building Construction. Harris.

Content

1. Introduction to cabinet and furniture making.
 - design
 - material
 - processes
 - tools
2. Basics of cabinet making
 - joints
 - assembly
3. Finishing
 - reasons for finishing
4. Design
 - function
 - appearance

BUILDING CONSTRUCTION 22B **(Concrete and Form Making)**

References

A23-1 — 1967 Concrete Materials and Methods of Concrete Construction.
Canadian Standards Association.

Content

1. Principles of laying out building lines
 - legal description
 - reference points
2. Introduction to concrete form construction
 - foundations and footings
 - design of forms
 - soils
3. Form construction
4. Principles and practices in making concrete
 - definition of concrete
 - materials used
 - proportions
 - testing

BUILDING CONSTRUCTION 22C **Framing (Residential)**

References

Building Construction: Materials and Methods. Miller.

Content

1. Floor support framing
 - layout and construction systems

2. Floor framing
 - layout
 - construction
 - sheathing
 - bracing
3. Wall framing
 - post and beam
 - balloon
 - Western platform
 - sheathing
4. Ceiling and roof framing
 - joists
 - roof terminology
 - types
 - cut rafters
 - sheathing

BUILDING CONSTRUCTION 32A **(Sketching, Reading Drawings and Estimating)**

Content

1. Quantity survey
 - excavation
 - formwork
 - drainage
 - concrete
 - waterproofing
 - floor support
 - floor assembly
 - walls
 - ceiling joists and roof framing
 - roof covering
 - doors and windows
 - interior finish
 - exterior wall finish
2. Material and labor costs
 - unit costs
3. Sub-trade bids
 - plumbing
 - electrical
 - heating
 - plastering or dry wall
 - sheet metal
 - painting
 - landscaping
4. Overhead and profit
 - salaries
 - permits and legal costs
 - utilities
 - testing
 - professional services
 - cleanup

- plant
- profit
- 5. Reading and drawing
 - architectural symbols
 - working drawings
 - full scale layout
- 6. Sketching
 - freehand sketching
- 7. Pictorial drawing
 - isometric

BUILDING CONSTRUCTION 32B

(Exterior and Interior Finishing)

Content

- 1. Introduction to exterior and interior finishing
 - design
 - materials
- 2. Safety
 - scaffolds
 - power tools
- 3. Exterior finishing
 - corners and eave
 - exterior trim
 - roof finishing
 - windows and doors
 - exterior wall covering
- 4. Stair construction
 - stair design
 - layout
- 5. Insulation, vapor barriers, building papers and ventilation
- 6. Interior finishing
 - wall and ceiling materials
 - finished floors
- 7. Protective and decorative coatings
 - materials
 - applications

BUILDING CONSTRUCTION 32C

This last module in the Building Construction major is open to students who have completed 30 credits or six modules in the major.

The 125 hours of instruction time available in this module may be used to:

- a. provide greater depth to a module taken previously. Individual students, groups of students or the whole class may elect to study an area in depth. This could be cabinet making, framing (commercial or residential), concrete work or any of the modules named in the Building Construction sequence.

- b. engage in actual construction work supervised by the Building Construction teacher as a-work experience coordinator and a journeyman on the job.

MACHINE SHOP MAJOR

MACHINE SHOP 12

References

Machining Fundamentals. Walker. (1969)

Content

1. Safety
2. Measurement and layout
3. Tool processes
 - removal of material by mechanical means
 - power saw
 - lathe
 - shaper
 - drill press
 - grinder
4. Metal characteristics
 - identification
 - treatment
 - application

MACHINE SHOP 22A

(Benchwork, Lathe)

Content

1. Material shaping
 - shearing tools
 - hack saws
 - chisels
 - files
 - taps and dies
 - reamers
 - power tools
 - lathe
 - milling machine
 - shaper
2. Thermal Removal
 - use of oxy-acetylene torch

MACHINE SHOP 22C

(Advanced Machinery)

References

Machinery Handbook. Oberg and Jones. (17th Edition)

Content

1. Advanced machinery
 - mating parts
 - fit
 - classification
 - assembly
 - precision measuring
 - shop calculations
 - threads
 - tapers
 - pulleys and gears
2. Machine operations
 - cutting threads
 - tapers
 - keyways
 - spline cutting
3. Heat treating

MACHINE SHOP 32A

(Reading Drawings and Estimating)

Content

1. Graphic language
 - types of drawings
2. Instrument drawing
 - drafting tool use
 - make drawings
3. Lettering
4. Shape description
 - perspective
 - orthographic
 - oblique
 - sectional views
5. Size description
6. Thread description
 - conventional
 - specifications
7. Freehand sketching
 - isometric
 - oblique
 - orthographic

MACHINE SHOP 32B

(Metallurgy)

Content

1. Ferrous and non-ferrous metals
 - classification
 - ferrous
 - non-ferrous

- high temperature
- rare metals
- 2. Production of steel
- 3. Properties of metals
- 4. Testing and inspection of metals
- 5. Metal working processes
 - removal
 - joining

MACHINE SHOP 32C

This last module in the Machine Shop major is open to students who have completed 30 credits or six modules in the major.

The 125 hours of instruction time available in this module may be used to:

- a. Provide greater depth to a module taken previously. Individual students, groups of students or the whole class may elect to study an area in depth. This could be more lathe work, metallurgy, other machining or any of the modules named in the Machine Shop sequence.
- b. Engage in actual machining work supervised by the Machine Shop teacher as a work experience coordinator and a journeyman on the job.

WELDING MAJOR

WELDING 12

References

Welding. Pender.

Content

- 1. Career field study
- 2. Trade study
- 3. Safety
- 4. Measurement and layout for welding
- 5. Joining and separating metals
 - cohesion
 - adhesion
- 6. Metal removal
 - thermal separation
- 7. Fabrication and repair

WELDING 22A

References

Modern Welding. Althouse et al. (1970 Edition)

Content

1. The electric arc process
 - safety
 - terminology
 - machines and electrodes
 - cohesion
2. Oxy-acetylene process
 - safety
 - cohesion
 - flame cutting
 - forming
 - pipe welding
3. Fabrication and repair

WELDING 22B**Content**

1. Electric arc
 - cohesion
 - special techniques
2. Oxy-acetylene
 - brazing
 - hard surfacing
3. Fabrication and repair

WELDING 22C**Content**

1. Electric arc welding
 - vee butts
 - pipe welding
2. Special electric arc applications
 - specialized electrodes
 - thermal separation
3. Special oxy-acetylene applications
 - braze welding
 - unique applications of cohesion and adhesion
4. Fabrication and repair
5. Metal inert gas welding (optional)
 - theory
 - TIG welding
6. Tungsten inert welding (optional)
 - theory
 - TIG welding

WELDING 32A

Content

1. Reading drawings and sketching
 - lines
 - projections
 - freehand sketching
 - symbols
2. Metallurgy
 - properties of metals
 - identification of metals
 - classification; ferrous and non-ferrous

WELDING 32B

Content

1. Fabrication and repair
 - design
 - project work

WELDING 32C

The last module in the Welding major is open to students who have completed 30 credits or six modules in the major.

The 125 hours of instruction time available in this module may be used to:

- a. provide greater depth to a module taken previously in the Welding sequence. Individual students, groups of students or the whole class may elect to study an area in depth. This could be advanced and special Welding techniques, fabrication of special projects or research in metallurgy.
- b. engage in actual Welding on the job supervised by the Welding teacher as a work coordinator and by a journeyman.

SHEET METAL MAJOR

SHEET METAL 12

References

Hand Processes, Sheet Metal Series. (1964 Edition)
Machine Process, Sheet Metal Series. (1964 Edition)
Measurement and Layout. (1964 Edition)
Sheet Metal Shop Practice. Bruce. (1966 Edition)

Content

1. Career field study
 - related occupations
 - employment opportunities
 - trade organization
2. Safety

3. Industrial structures
 - social structure of industry
 - collective bargaining
 - apprenticeship
4. Measurement
 - systems; metric, English
 - measuring instruments
 - layout instruments
5. Tool processes
 - mechanical removal of metal
 - thermal removal
 - chemical removal
 - combining material; fastening methods
 - forming
6. Elements of pattern development
 - simple pattern development
 - parallel-line development
 - radical-line development

SHEET METAL 22A (Pattern Development)

Content

1. Principles of sheet metal layout
 - simple pattern development
 - parallel line development
 - radical line development
 - triangulation

SHEET METAL 22B (General Practices)

Content

1. General sheet metal work
 - tools and equipment
 - rectangular objects
 - conical objects

SHEET METAL 22C (Joining)

Content

1. Joining sheet metal
 - mechanical methods of joining
 - adhesion
 - cohesion
 - projects applying methods of joining

SHEET METAL 32A (Air-conditioning and Residential Heating)

Content

1. Heating and air-conditioning
 - air-conditioning systems; types, installation, controls
 - heating systems; fittings, installations, controls

SHEET METAL 32B (Cabinet Work)

Content

1. Introduction to sheet metal cabinet work
 - hospital equipment
 - restaurant equipment
 - general cabinet work
 - layout and manufacture one cabinet type project

SHEET METAL 32C

The last module of the Sheet Metal sequence is open to students who have completed 30 credits or six modules in the major.

The 125 hours of instruction time available in this module may be used to:

- a. provide greater depth to a module taken previously. Individual students, groups of students or whole classes may elect to study an area in more detail. This in-depth study could be in Pattern Development, Air-conditioning, Heating or any of the modules named in the Sheet Metal sequence.
- b. engage in actual Sheet Metal work supervised by the Sheet Metal teacher as a coordinator of the student and a Journeyman on the job.

PIPING MAJOR

PIPING 12

References

Plumbing and Drainage Regulations (Alberta)
Pipe Fitters and Pipe Welders Handbook. Frankland

Content

1. Career field study
 - occupations
 - employment opportunities
2. Trade study
 - certification
 - structure of the piping industry
 - union organization
3. Safety

4. Measurement
 - systems; English, metric
 - instrument used
 - layout
5. Piping tools and methods of joining pipe
 - threading
 - soldering
 - caulking
 - mechanical joints
 - cementing
6. Adapting pipes and fittings
 - steel to copper
 - metal to plastic
 - substitutions
7. Identifying, selecting and ordering materials
 - reading fittings
 - identifying and selecting materials
 - valve functions

PIPING 22A (Domestic Plumbing)

Content

1. Rough-in procedures
 - plan, layout, cut holes
 - assemble and install drains
 - install water lines
 - rough in tub
2. Finishing procedures
 - set water closet
 - hang lavatory basin
 - connect water lines
 - finish and test

PIPING 22B (Domestic Heating)

References

Steamfitting and Hot Water Heating Information Sheets.

Content

1. Hot water heating
 - sizing and erecting boiler
 - selecting and installing radiation and convection systems
 - insulating and preparation for operation
 - adjusting and setting controls
2. Gasfitting
 - domestic
 - planning, sizing, laying out, installing and testing gas piping in a house

- sizing and erecting gas appliances
- activating, adjusting, setting and servicing gas appliances
- venting gas appliances for domestic use
- converting gas appliances for domestic use

PIPING 22C (Commercial and Industrial Heating)

Content

1. Low pressure steam heating
 - sizing, erecting and installing a low pressure steam boiler
 - selecting and installing radiators, convectors and unit heaters
 - adjust and set controls
2. Applications of steam other than heating
 - commercial uses of steam other than for heating
 - hanging and supporting pipe
 - expansion and contraction allowances

PIPING 32A (Commercial and Industrial Plumbing)

Content

1. Plumbing procedures used in multiple storied buildings or industrial plants
 - sizing vents and drains
 - installing sleeves and inserts for running pipes through concrete
 - prefabrication techniques
 - setting fixtures
 - sizing rainwater leaders
 - soventing techniques

PIPING 32B (Shop drawing, sketching, estimating and reading drawings)

Content

1. Symbols and lines
2. Using the drawing instruments
3. Reading drawings
4. Draw simple plan and elevation sketch
5. Make an isometric drawing

PIPING 32C

The last module in the Piping sequence is open to students who have completed 30 credits or six modules in the major.

The 125 hours of instruction time available in this module may be used to:

- a. provide greater depth to a module taken previously. Individual students, groups of students, or the whole class may elect to study an area in more detail. This could be in domestic plumbing, commercial plumbing, heating, air conditioning, or any of the modules named in the Piping sequence, or
- b. engage in actual pipe fitting or plumbing work supervised by the Piping teacher as a coordinator and a journeyman on the job.

IV. ELECTRICITY-ELECTRONICS

Field Objectives

The Electricity-Electronics career field should provide a student an opportunity to:

1. Gain an understanding of the career field.
2. Develop skills and knowledge necessary for job entry or articulation with post-high school institutions.
3. Develop and strive to achieve standards of performance acceptable to the industry.

E L E C T R I C I T Y M A J O R **ELECTRICITY-ELECTRONICS 12**

References

Intermediate Electricity, Book II. Long. (1969 Edition)

Content

1. Career field study
 - occupational information
2. Safety and first aid
3. Electricity
 - definition and sources
4. Conductors and insulators and semiconductors
5. Magnetism and electromagnetism
6. Electrical units and measurement
7. Electric circuits
8. Symbolic representation of electric components
9. Electrical laws; Ohm's, Power, Kirchoff's
10. Soldering and making connections in electrical circuits

11. Systems study
 - audio
 - electrical distribution
 - generation plants
 - broadcast receiver
 - others that are appropriate

ELECTRICITY-ELECTRONICS 22A

References

Laboratory Manual — Basic Electricity. Zbar. (3rd Edition)
Energy, Electricity and Electronics. Miller et al.
Basic Electronics. Grob. (1971 Edition)

Content

1. Alternating voltage and current
 - A.C. power-generation
 - audio and radio signals
 - electrical laws
2. Inductance
3. Capacitance
4. Capacitive reactance
5. Capacitive circuits
6. Alternating current circuits
7. Semi-conductor and vacuum tube diode
8. Power supplies
9. Transistors
10. Electronic tubes

ELECTRICITY 22B (Residential Wiring)

References

Interior Electric Wiring. Graham. (6th Edition)
Canadian Electrical Code, C22.1. (11th Edition, 1972)

Content

1. Career opportunities
2. Safety
3. Installation of residential wiring
 - planning
 - tools
 - installation procedures
 - power outlets
 - code requirements
 - special circuits
4. Maintenance of electrical services
 - gas furnace heating controls
 - electric heating
 - rewiring
5. Management practices
 - organization
 - bidding for work
 - employee concerns

ELECTRICITY 22C (Appliance Service)

References

Repair manuals.

Content

1. Service equipment
 - care and use of hand tools and meters
 - finding service information
2. Troubleshooting
 - safety
 - cleaning appliances
 - procedures for finding problem
3. Servicing procedures
4. Estimating and pricing
5. Trade supplies
6. Occupational information

ELECTRICITY 32A
(Commercial Wiring)

References

Canadian Electrical Code.

Content

1. Technical drawing
 - plan views, dimensioning and symbols
2. Wiring methods
 - raceways and conductors
 - tools and equipment
 - fittings and boxes
3. Installation of services and feeders
 - service entrance
 - protective equipment
 - metering equipment
4. Control equipment
5. Installation of equipment
 - lighting equipment
 - special equipment
6. Heating controls

ELECTRICITY 32B
(Electro-magnetical)

Content

1. Basic generator
2. D.C. motors
3. A.C. generators
4. A.C. motors
5. Transformers

ELECTRICITY 32C

The final module in the Electricity sequence is available to students who have completed 30 credits or six modules in the major.

The 125 hours of instruction time in this module may be used to:

- a. provide greater depth to a module taken previously. Individual students, groups of students or whole classes may elect to study an area in more detail. The in-depth study could be in residential wiring, appliance servicing or any of the other modules listed in the sequences.
- b. engage in actual wiring or electrical repair work by means of a program co-ordinated by the Electricity teacher and under the supervision of a journeyman on the job.

ELECTRONICS MAJOR

ELECTRICITY-ELECTRONICS 12 and 22A

References

Are common with the Electricity Major.

ELECTRONICS 22B (Audio)

Content

1. Career field study
 - school programs available
 - career opportunities
2. Safety
3. Audio devices
 - input transducers
 - audio preamplification
 - power amplifiers
 - output transducers
 - audio measurements
 - equipment maintenance

ELECTRONICS 22C (AM-FM receivers and transmitters)

Content

1. Course orientation
2. Safety
3. Radio transmission and reception principles
 - history
 - receiver power supplies
 - radio receiver audio amplifiers
 - AM demodulation
 - automatic volume control
 - AM-IF amplifiers
 - AM converters

- radio servicing
- FM receivers
- AM transmission theory
- power amplifiers
- transmitter tubes
- transmitter power supplies
- transmitter controls
- AM modulation
- FM transmitters
- antennas and transmission lines

ELECTRONICS 32A (T.V. Receivers)

Content

1. Introduction to television
2. Safety
3. Television receivers
4. The cathode-ray tube
5. Television receiver circuitry
6. The video signal and picture reproduction
7. Video I-F amplifiers
8. R.F. tuners
9. Producing a T.V. signal
10. Television antennas
11. The sound circuits

ELECTRONICS 32B (Instruments)

Content

1. Career field study
2. Measurement and measuring devices
 - meters
 - bridges
 - oscilloscopes
 - semiconductor testers
 - tube testers
 - signal generators
 - capacitance checkers

ELECTRONICS 32C (Digital Logic)

Content

1. Basic binary and Boolean algebra concepts
2. Codes
3. Logic systems
4. Practical subsystem

V. PERSONAL SERVICES

Field Objectives

The Personal Services courses should give students an opportunity to:

1. Gain an understanding of the Career Field.
2. Promote a concept of personal service and assist the student to develop an individual's well-being and health.
3. Develop the basic skills and knowledge necessary for entry into job or post-secondary educational institutions.

FOOD PREPARATION MAJOR

FOOD PREPARATION 12

References

Food Preparation. Andrews. (1967 Edition)

Content

1. Opportunities in the food service industry.
2. Utensils and cooking equipment
3. Tools and processes used to serve and portion foods
4. Processes used to cut, form and mix foods
5. Safety in the kitchen
6. Storage of food
7. Cleaning and sanitation
8. Measuring and planning
9. Basic nutrition and menu planning
10. Practical cookery

FOOD PREPARATION 22A (Kitchen Production)

References

Quantity Food Production, Standards, Principles and Techniques. Kotschevar. (2nd Edition, 1966)

Content

1. Vegetable cookery
 - classification
 - standards
 - cooking techniques
2. Stocks
3. Soups
 - classification
 - standards
 - garnishes

4. Sauces
5. Gravies
6. Meats
7. Desserts and short pastry products

FOOD PREPARATION 22B (Pantry Production)

Contents

1. Pantry production
 - sandwiches
 - garnishes
2. Salads
3. Appetizers

FOOD PREPARATION 22C (Short Order)

Content

1. Beverages
2. Eggs
3. Dairy products
4. Use of fats and oils
5. Cereals and breakfast foods
6. Serving food
7. The menu

FOOD PREPARATION 32A (Kitchen Production)

Content

1. Meat
2. Fish
3. Poultry
4. Sauces, soups, salads, and vegetable dishes
5. Serving the public

FOOD PREPARATION 32B (Baking and Decorating)

Content

1. Baking ingredients
2. Cakes, pastries and yeast doughs
3. Decorating and filling cakes, yeast goods and pastries
4. Desserts

FOOD PREPARATION 32C **(Kitchen Management)**

Content

1. Managing the kitchen
2. Nutrition
3. Purchase, storage and control of kitchen supplies
4. Planning work activity
5. Cost control and menu pricing
6. Serving of food

FOOD PREPARATION 32D

The final module in the Food Preparation major is open to students who have completed 35 credits or seven modules in the major.

The 125 hours of instruction time available in this module may be used to:

- a. provide greater depth to a module taken previously in the sequence. Individual students, groups of students or the whole class may elect to study an area in depth.
- b. engage in actual food service work on the job supervised by the Food Preparation teacher and a chef on the job.

BEAUTY CULTURE MAJOR

BEAUTY CULTURE 12

Reference

Standard Textbook of Cosmetology. Kibbe and Ware. (1972)

Content

1. Career field study
2. Equipment and implements
 - identification
 - safety
3. Trichology
4. Nail and manicures
5. Skin care, make-up and appearance
6. Personality development
7. Hair styling
8. Basic cosmetology

BEAUTY CULTURE 22A

Content

1. Hairstyling
2. Trichology

3. Hair coloring
4. Cosmetology
5. Equipment and implements
6. Ethics

BEAUTY CULTURE 22B

Content

1. Hair coloring, semi-permanent
2. Hair styling
3. Cold waving
4. Physiology and anatomy
5. Trichology

BEAUTY CULTURE 22C

Content

1. Hairstyling
2. Cold waving
3. First aid and health
4. Hair coloring

BEAUTY CULTURE 32A

Content

1. Advanced hair styling
2. Hair coloring
3. Advanced cosmetology
4. Shop management

BEAUTY CULTURE 32B

Content

1. Hair styling
2. Competitive judging
3. Color
4. Shop management
5. Wigs
6. Job search
7. Practice

BEAUTY CULTURE 32C and 32D

Content

1. Customer service
 - develop speed and accuracy
2. Standards
3. Meeting the customer
4. Work experience

FASHIONS AND FABRICS MAJOR

FASHIONS AND FABRICS 12 (Quick and Easy Sewing)

References

Singer Sewing Book. Cunningham.
Clothing: A Comprehensive Guide. Craig. (1968)

Content

1. Career field study
2. Safety
3. Introduction to clothing
 - significance of clothing to individuals
4. Planning a wardrobe
5. Introduction to fabrics
6. Sewing by machine
7. Patterns

FASHIONS AND FABRICS 22A (Knits)

Content

1. Knits on the market
2. Care of knits
3. Patterns for knits
4. Knit sewing techniques
5. Projects using knits

FASHIONS AND FABRICS 22B (Fashion World)

Content

1. Principles and elements of design
2. Fashion or fad
3. Modelling

4. Consumerism
5. Merchandising in the fashion world
6. Projects

FASHIONS AND FABRICS 22C
(Tailoring)

Content

1. Fabrics for tailoring
2. Fitting and alterations
3. Tailoring techniques
4. Accessories

FASHIONS AND FABRICS 32A
(Interior Design)

Content

1. Principles and elements of design as related to the home
2. Household textiles
3. Projects for the home
 - window dressing
 - simple upholstery
 - home accessories
 - table linen

FASHIONS AND FABRICS 32B
(Custom Sewing and Textiles)

Content

1. Career opportunities
2. Government and union legislation
3. Management
4. Consumerism
5. Cleaning fabrics

(Alternate Content for 32B)
PRODUCTION TECHNOLOGY

References

General Industry. Lindbeck and Lathrop. (1969)
The Social Psychology of Industry. Brown. (1965)

Content

1. An introduction to industry through production technology
 - modern civilization and industrial dependence
 - facets of industry; men, machines, materials

2. Industry and division of labor
 - job and operation breakdowns
 - flow charts
 - labor allocations
3. Personnel organization
 - industrial organization
 - formal organization
 - informal organization
4. Research and development
 - elements of salable product
 - industrial research
 - prototype development
5. Simulated industrial production
 - industrial production
 - physical problems
 - sociological problems
6. Technological changes
 - growth of knowledge
 - technological changes and man

FASHIONS AND FABRICS 32C

The last module of the Fashions and Fabrics sequence is open to students who have completed 30 credits or 6 modules in the major.

The 125 hours of instruction time available in this module may be used to:

- a. provide greater depth to a module taken previously. Individual students, groups of students or whole classes may elect to study an area in more detail. This in-depth study could be in Textiles, Construction, Custom Sewing, or any of the topics previously studied.
- b. engage in actual job training under a work experience plan whereby the Fashions and Fabrics teacher acts as coordinator between student and industry.
- c. establish a boutique within the school which would incorporate business training with creative promotion, production and sales.

HEALTH SERVICES MAJOR

HEALTH SERVICES 12

References

Basic Nursing Procedures. Hornemann. (1968 Edition)
Textbook for Nursing Assistants. Cherescavich. (2nd Edition)

Content

1. First aid
 - resuscitation
 - control of bleeding
 - bone and joint injuries
 - dressings and bandages
 - casualty care
 - community disaster

2. Health careers
 - nursing assistant
 - dietary aide
 - housekeeping aide
 - physical therapy aide
 - activities aide
 - dental receptionist
 - unit clerk
 - medical secretary
3. Home nursing
 - community health agencies
 - illness in the home
 - patient care
 - common treatments
 - special needs of sick
 - adaptation of home equipment

HEALTH SERVICES 22

Content

1. Orientation to health care institutions
2. Health care assistant
3. Communication and vocabulary
4. Anatomy and physiology
5. Nursing practices
6. Disease classification
7. Safety
8. Special community problems

HEALTH SERVICES 32A

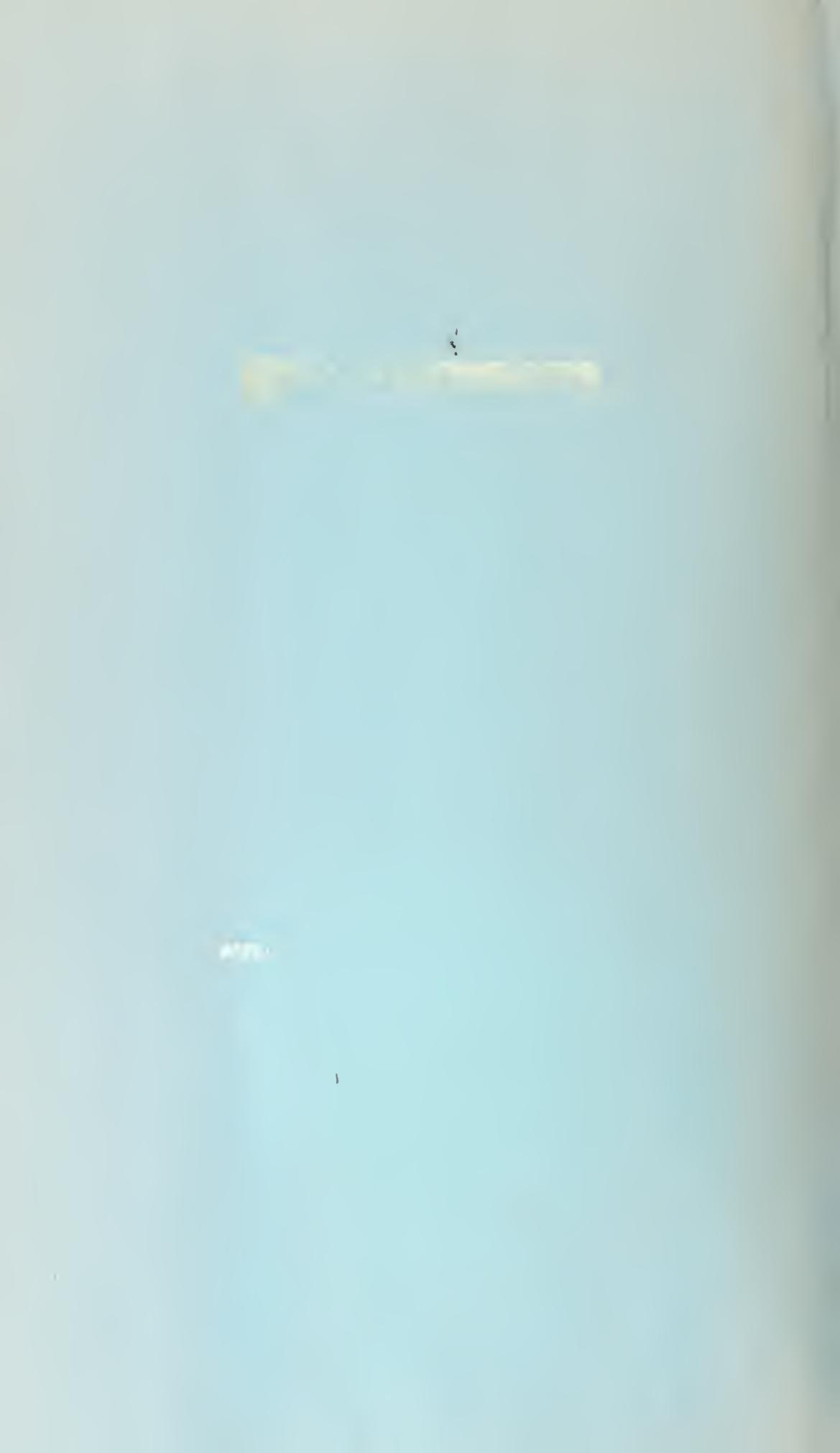
Content

1. Role of nursing assistant
2. The patient
3. Working environment
4. Patient care and comfort
5. Nutritional needs
6. Anatomy and physiology

HEALTH SERVICES 32B

Content

1. Introduction to institutional services
2. Communications
3. Anatomy and physiology
4. Stages of growth of the human
5. Patient care
6. Care of special types of patients



LB 1629-5 A3 A35 1970C GR-10-12
PROGRAM OF STUDIES FOR SENIOR
HIGH SCHOOLS OF ALBERTA --

39896411 CURR HIST



* 000022391759 *

DATE DUE' SLIP

AM-OF-STUDIES-FOR-SENIOR <39896411-----

UNIVERSITY LIBRARY



LB 1629.5 A3 A35 1970c gr. 10-12
Program of studies for senior
high schools of Alberta. -

39896411 CURR HIST

CURRENT COPY

For Reference

NOT TO BE TAKEN FROM THIS ROOM

